Incident Number: nAPP2500254282

Incident Closure

Brushy Draw 30 – 31 Federal Battery

Section 31, Township 25 South, Range 30 East
Facility ID: fAPP2207332396
Latitude & Longitude: 32.09137, -103.91807
County: Eddy County
Vertex File Number: 25E-00017

Prepared for:
ExxonMobile Upstream Company

Prepared by:
Vertex Resource Services Inc.

Date:
April 2025

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Prepared for:
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Carlsbad, New Mexico 88220

New Mexico Oil Conservation Division
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SENIOR PROJECT MANAGER, REPORT REVIEW

4/7/2025
Date

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1.0 Introduction

ExxonMobil Upstream Company (Exxon) retained Vertex Resource Services Inc. (Vertex) to conduct a deferral request for a produced water release that occurred on January 1, 2025, at Brushy Draw 30 – 31 Federal Tank Battery facility ID fAPP2207332396 (hereafter referred to as the "site"). Exxon submitted an initial C-141 Release Notification to New Mexico Oil Conservation Division (NMOCD) on January 2, 2025. Incident ID number NAPP2500254282 was assigned to this incident.

This report provides a description of the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for closure of this release, with the understanding that restoration of the release site will be completed at such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on January 1, 2025, due to corrosion. The incident was reported on January 2, 2025, and involved the release of approximately 47 barrels (bbl.) of produced water on the pad site. Approximately 10 bbl. of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report. Daily Field Report (DFRs) and site photographs are included in Appendix B.

3.0 Site Characteristics

The site is located approximately 29 miles Southeast of Carlsbad, New Mexico. The legal location for the site is Section 31, Township 25 South and Range 30 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management (BLM) property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release area on and in proximity to the constructed pad (Figure 1).

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site's surface geology primarily comprises Qep - Eolian and piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2024). The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018). The surrounding landscape is associated with plains and fan piedmonts with elevations ranging between 2,000 and 5,700 feet. The climate is semiarid with average annual precipitation ranging between 5 and 15 inches. Predominant soil textures around the site are well-drained fine sands and fine sandy loams with low runoff potential (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses interspersed with shrubs and half-shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted facility pad.

4.0 Closure Criteria Determination

The nearest active well to the site is an industrial and prospecting development well 1.95 miles to the south. There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 722 feet northwest of the site (United States Fish and Wildlife Service, 2025). At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC

The nearest depth to groundwater reference to the site is an exploratory well advanced 1.57 miles to the east on January 17, 2015. Depth to groundwater at the well was 277 feet below ground surface (bgs) (New Mexico Office of the State Engineer, 2025). Information pertaining to the depth to ground water determination is included in Appendix A.

Table 1. Closure Criteria Determination			
Site Name: Brushy Draw 30-31 Federal Battery			
Release Coordinates: 32.091537,-103.918753		X: 602031	Y: 3551093
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	100-500 ft	
	Distance between release and nearest DTGW reference	**1 - 5 mi**	
	Date of nearest DTGW reference measurement	**January 17, 2015**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	500 - 1000 ft	
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	1 - 5 mi	
4	Within 300 feet from an occupied residence, school, hospital, institution or church	5mi <	
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	1 - 5 mi	
	ii) Within 1000 feet of any fresh water well or spring	1 - 5 mi	
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	1 - 5 mi	
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	5mi <	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	1 - 5 mi	
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	500 - 1000 ft	
11	Soil Type	Fine sand, sandy clay loam	
12	Ecological Classification	Loamy sand	
13	Geology	Eolian and peidmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

The depth to groundwater reference exceeded 0.5 miles from the release area; therefore, the closure criteria for remediation and reclamation of the site was determined to be associated with the strictest constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

An initial site inspection of the release area was completed on January 23, 2025, which identified the area of the release specified in the initial C-141 Report. The impacted area was determined to be approximately 8,971 square feet. The Daily Field Report (DFR) associated with the site inspection is included in Appendix B.

Remediation efforts began on January 23, 2025, and were finalized on March 20, 2025. Vertex personnel supervised the excavation of impacted soils. Soils were removed to a depth of 1 to 3 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility as stipulated by the Form C-138 Request for Approval to Accept Solid Waste. DFRs documenting various phases of the remediation are presented in Appendix B.

Notification that confirmatory samples were being collected was provided to the NMOCD on February 13, 2025. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 69 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Cardinal under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 3, and the laboratory data reports are included in Appendix C. All confirmatory samples collected and analyzed were below closure criteria for the site.

6.0 Closure Request

The release area was fully delineated, remediated, and backfilled with local soil by March 20, 2025. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release location “under 50 feet to groundwater”. Based on these findings, Exxon requests that this release be closed.

Should you have any questions or concerns, please do not hesitate to contact Chad Hensley at 575.200.6167 or Chensley@Vertexresource.com.

7.0 References

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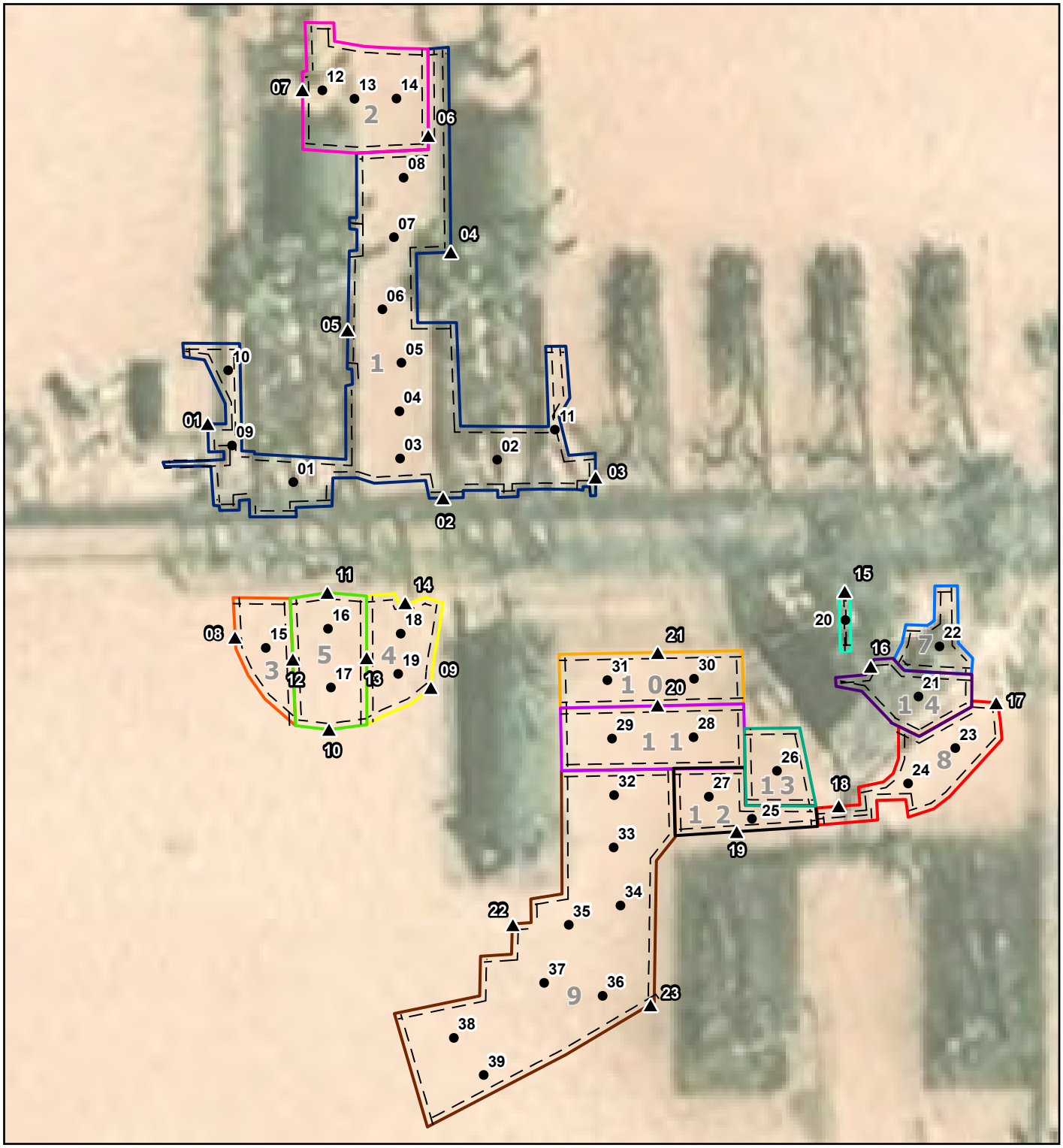
8.0 Limitations

This report has been prepared for the sole benefit of ExxonMobil. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division and the Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and ExxonMobil. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

FIGURES



- Base Sample (Prefixed by "BS25-")
- Wall Sample (Prefixed by "WS25-")
- Excavation 1 to 1.5' bgs (~1,811 sq.ft | 445 ft.)
- Excavation 2 to 1' bgs (~455 sq.ft. | 91 ft.)
- Excavation 3 to 1.5' bgs (~183 sq.ft. | 61 ft.)
- Excavation 4 to 1.5' bgs (~251 sq.ft. | 68 ft.)
- Excavation 5 to 3' bgs (~324 sq.ft. | 74 ft.)
- Excavation 6 to 3' bgs (~21 sq.ft. | 25 ft.)
- Excavation 7 to 1' bgs (~131 sq.ft. | 55 ft.)
- Excavation 8 to 1' bgs (~299 sq. ft. | 103 ft.)
- Excavation 9 to 1.5' bgs (~1530 sq. ft. | 203 ft.)
- Excavation 10 to 2' bgs (~326 sq. ft. | 86 ft.)
- Excavation 11 to 3' bgs (~385 sq. ft. | 90 ft.)
- Excavation 12 to 2' bgs (~209 sq. ft. | 75 ft.)
- Excavation 13 to 1' bgs (~162 sq.ft | 51 ft.)
- Excavation 14 to 3' bgs (~196 sq.ft. | 64 ft.)

VERTEX

0 5 10 20 ft

NAD 1983 UTM Zone 13N
Date: Mar 18/25

Map Center:
Lat/Long
32.091597°N, 103.918825°W

N

Confirmatory Sampling Site Schematic
Brushy Draw 30-31 Federal Battery

FIGURE: 1A

ExxonMobil

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2024. Approximate lease boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2025. Site features from GPS, Vertex, 2025.

VERSATILITY. EXPERTISE.

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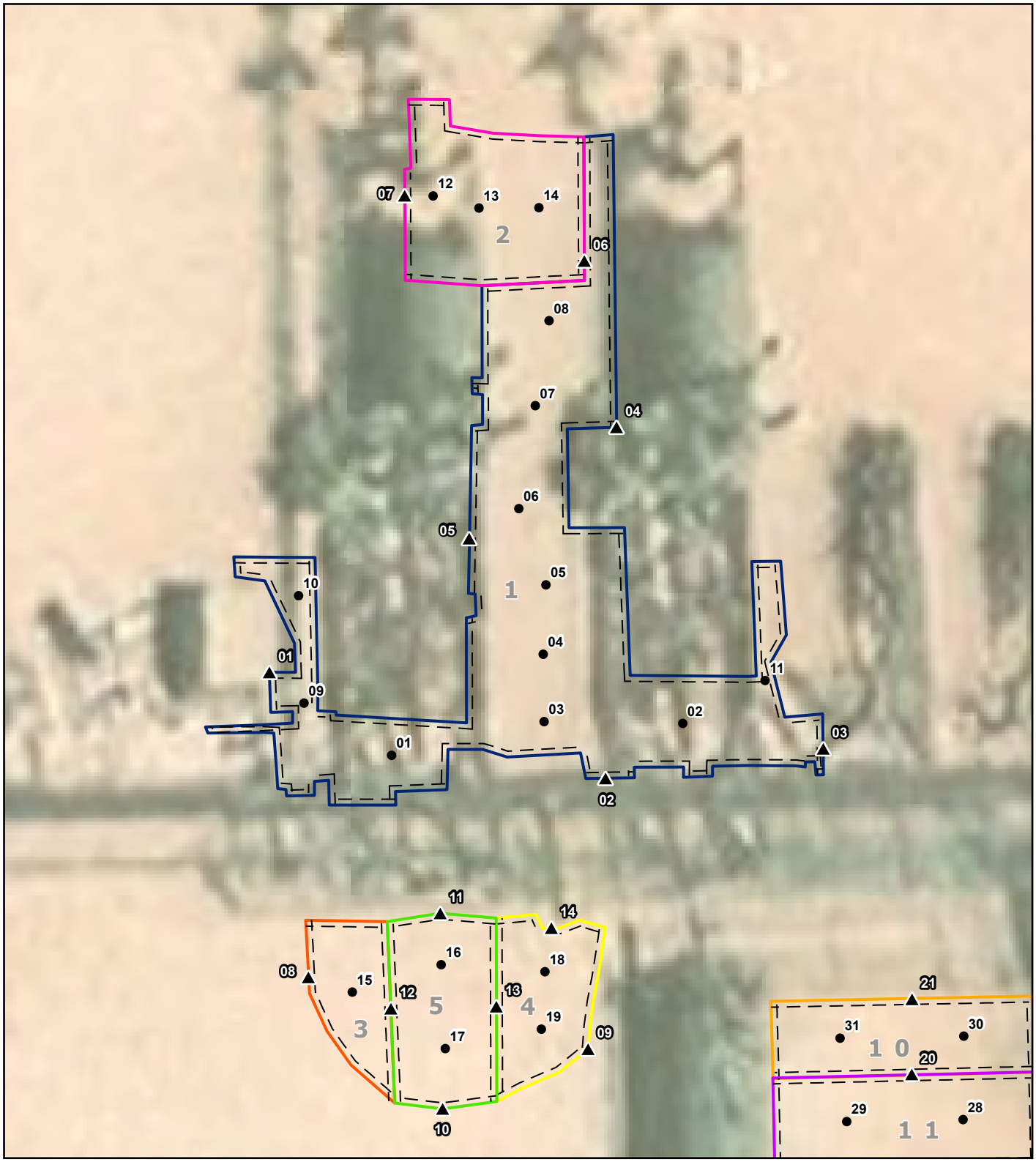

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VERTEX

0 3 6 12 ft

NAD 1983 UTM Zone 13N
Date: Mar 18/25

Map Center:
Lat: 32.091705°N,
Long:103.918912°W

N

Confirmatory Sampling Site Schematic
Brushy Draw 30-31 Federal Battery

FIGURE: 1B

ExxonMobil

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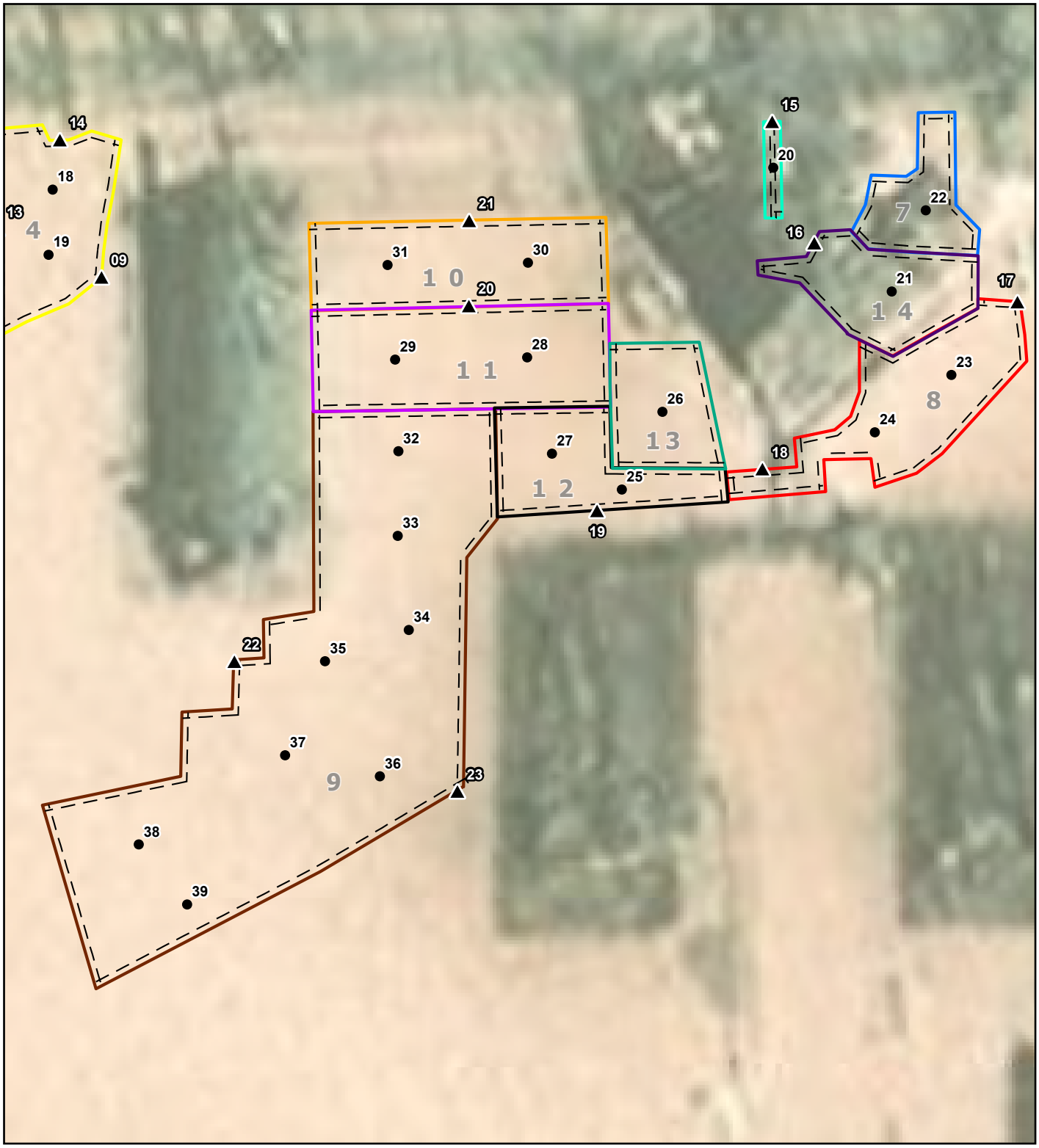

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VERTEX

0 3 6 12 ft

NAD 1983 UTM Zone 13N

Date: Mar 18/25

Map Center:
Lat: 32.091448°N,
Long:103.918735°W

N

Confirmatory Sampling Site Schematic
Brushy Draw 30-31 Federal Battery

FIGURE: 1C

ExxonMobil

Document Path: C:\Users\cserrano\Documents\VERTEX\US\ExxonMobil Upstream Company\25E-00017\Project\25E-00017.aprx

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VERSATILITY. EXPERTISE.

TABLES

Client Name: ExxonMobil Upstream Company
Site Name: Brushy Draw 30-31 Federal Battery
NMOCD Tracking #: nAPP2500254282
Project #: 25E-00017
Lab Reports: H250927, H251017, H251073, H251075, and H251678

Table 3. Confirmation Sample and Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater ≤ 50 ft							
BS25-01	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-02	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-03	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-04	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-05	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-06	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-07	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-08	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	176
BS25-09	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-10	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-11	1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-12	1	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-13	1	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-14	1	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-15	1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-16	3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-17	3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-18	1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-19	1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-20	3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	144
BS25-21	3	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	256
BS25-22	1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	112
BS25-23	1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-24	1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	208
BS25-25	2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	112
BS25-26	1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	160
BS25-27	2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	192
BS25-28	3	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	208
BS25-29	3	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-30	2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	176
BS25-31	2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-32	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-33	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	128
BS25-34	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-35	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-36	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-37	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-38	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	80

VERTEX

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			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater ≤ 50 ft							
BS25-39	1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-01	0-1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-02	0-1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	**6,700**
	0-1.5	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	336
WS25-03	0-1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	80
WS25-04	0-1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	240
WS25-05	0-1.5	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	288
WS25-06	0.5-1	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-07	0-1	February 15, 2025	ND	ND	ND	ND	ND	ND	ND	240
WS25-08	0-1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	64
WS25-09	0-1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-10	0-3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	160
WS25-11	0-3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	**1,520**
	0-3	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	320
WS25-12	1.5-3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-13	1.5-3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	64
WS25-14	0-1.5	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	**1,360**
	0-1.5	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-15	0-3	February 19, 2025	ND	ND	ND	ND	ND	ND	ND	**1,260**
	0-3	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	352
WS25-16	0-3	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	208
WS25-17	0-1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	256
WS25-18	0-1	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	288
WS25-19	0-2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	128
WS25-20	0-3	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	128
WS25-21	0-2	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	176
WS25-22	0-1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	256
WS25-23	0-1.5	March 7, 2025	ND	ND	ND	ND	ND	ND	ND	144
WS25-24	0-1	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	240
WS25-25	0-1	March 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND
Backfill	-	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	240

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

VERTEX

APPENDIX A - Closure Criteria Research Documentation

OSE POD 0.5 Miles

12/11/2024, 8:13:17 AM

GIS WATERS PODs

- Active
- Plugged
-

OSE District Boundary

Water Right Regulations

Artesian Planning Area

NHD Flowlines

Stream River

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar

Online web user

This is an unofficial map from the OSE's online application.

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)			(quarters are smallest to largest)						(NAD83 UTM in meters)				(In feet)	(In feet)	(In feet
POD Number	**Code**	**Sub basin**	**County**	**Q64**	**Q16**	**Q4**	**Sec**	**Tws**	**Range**	**X**	**Y**	**Map**	**Distance**	**Well Depth**	**Depth Water**	**Water Column**
C 03782 POD1		CUB	ED	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2522	805	277	528
C 01360		CUB	ED	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3142	770	173	597
C 04705 POD1		CUB	ED	NE	NW	NE	35	25S	29E	598866.5	3551191.8		3155			
C 01361		CUB	ED	SW	SE	SW	05	26S	30E	603240.4	3548157.5		3221	775	184	591
C 03581 POD1		CUB	ED	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3646	800	320	480
C 03483		C	ED	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3676	700	200	500
C 04558 POD1		CUB	ED	SW	SE	SW	23	25S	29E	598353.7	3553039.4		4130			
C 04529 POD1		CUB	ED	NW	SW	NW	18	25S	30E	601076.9	3555733.7		4689			
C 04755 POD2		CUB	ED	SE	NW	SW	12	26S	29E	599857.0	3546955.1		4711	25		
C 04720 POD1		CUB	ED	SE	NW	SW	12	26S	29E	599807.3	3546968.8		4722			
C 04755 POD1		CUB	ED	SE	NW	SW	12	26S	29E	599787.4	3546971.4		4729	40		
C 04720 POD4		CUB	ED	SE	NW	SW	12	26S	29E	599812.4	3546955.0		4732			
C 04720 POD2		CUB	ED	SE	NW	SW	12	26S	29E	599835.7	3546932.1		4741			
C 04720 POD3		CUB	ED	SE	NW	SW	12	26S	29E	599835.7	3546932.1		4741			
C 04720 POD5		CUB	ED	SE	NW	SW	12	26S	29E	599840.0	3546920.4		4750	20		
C 04720 POD6		CUB	ED	SE	NW	SW	12	26S	29E	599857.7	3546880.9		4777	31		
C 04755 POD3		CUB	ED	SE	NW	SW	12	26S	29E	599747.8	3546862.3		4844	103		
														Average Depth to Water: **230 fe**		
														Minimum Depth: **173 feet**		
														Maximum Depth: **320 feet**		

Record Count: 17

UTM Filters (in meters):
Easting: 602022
Northing: 3551140
Radius: 005000

*** UTM location was derived from PLSS - see Help**

12/11/24 6:21 AM MST Water Column/Average Depth to Water

Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest

NAD83 UTM in meters

Well Tag	POD Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	C 03782 POD1	SE	SW	SW	28	25S	30E	604525.7	3551444.2	

* UTM location was derived from PLSS - see Help

Driller License:	331	**Driller Company:**	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.		
Driller Name:	STEWART, JOEL H.				
Drill Start Date:	2015-01-16	**Drill Finish Date:**	2015-01-17	**Plug Date:**	
Log File Date:	2015-02-19	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	8.63	**Depth Well:**	805	**Depth Water:**	277

Water Bearing Stratifications:

Top	Bottom	Description
260	320	Sandstone/Gravel/Conglomerate
320	380	Sandstone/Gravel/Conglomerate
380	410	Sandstone/Gravel/Conglomerate
410	530	Shale/Mudstone/Siltstone
530	590	Shale/Mudstone/Siltstone
590	600	Shale/Mudstone/Siltstone
600	630	Shale/Mudstone/Siltstone
630	650	Shale/Mudstone/Siltstone
650	700	Shale/Mudstone/Siltstone
700	710	Shale/Mudstone/Siltstone
710	760	Shale/Mudstone/Siltstone
760	770	Shale/Mudstone/Siltstone

Top	Bottom	Description
770	780	Shale/Mudstone/Siltstone
780	790	Shale/Mudstone/Siltstone
790	805	Shale/Mudstone/Siltstone

Casing Perforations:

Top	Bottom
270	805

12/11/24 6:57 AM MST **Point of Diversion Summary**

Water Right Summary

get image list

WR File Number:	C 03782	**Subbasin:**	CUB	**Cross Reference:**	
Primary Purpose:	EXP EXPLORATION				
Primary Status:	PMT Permit				
Total Acres:		**Subfile:**		**Header:**	
Total Diversion:	0.000	**Cause/Case:**			
Owner:	ATKINS ENGR ASSOC INC				
Contact:	CHRIS CORTEZ				
Owner:	BOPCO, L.P.				
Contact:	BRIAN PREGGER				

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	555125	EXPL	2014-11-14	PMT	LOG	C 03782	T	0.000	0.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 03782 POD1		Artesian	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2/3 MILE SW OF HEDGEHOG ROAD

*** UTM location was derived from PLSS - see Help**

12/11/24 6:59 AM MST **Water Rights Summary**

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): POD-1 Renumbered C-3832-POD 2	OSE FILE NUMBER(S): C 3782 (Exploratory) Renumbered C-3832
WELL OWNER NAME(S): BOPCO, L.P.	PHONE (OPTIONAL): (817) 390-8662
WELL OWNER MAILING ADDRESS: 201 N Main St Suite 2900	CITY: Fort Worth STATE: TX ZIP: 76102

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	05	40.1	N
LONGITUDE	103	53	32.2	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SW1/4SE1/4SW1/4SW1/4 of Section 28, Township 25 South, Range 30 East, in the NE corner of a well pad.

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
331	Joel H. Stewart	SBQ Drilling, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
01-16-15	01-17-15	805	±805	

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 277

DRILLING FLUID: ( ) AIR (•) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	270	14.75	ASTM A53B	Welded	8.625	0.322	
270	805	14.75	304 Stainless Steel	Welded	8.625	0.25	16
0	15	19	ASTM A53B	---	16	0.25	

STATE ENGINEER OFFICE 2015 FEB 16 PM 2:35

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	120	14.75	Sand Mix Ready Mix	90.36	grav. tremie meas.
120	170	14.75	Hydrated Bentonite Chips	35.90	grav. tremie meas.
170	805	14.75	6/9 Silica Sand	455.95	Tremie Pipe

FOR OSE INTERNAL USE Renumbered from C-3782-POD1 WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER C-3832	POD NUMBER POD 2	TRN NUMBER 555125
LOCATION 25.30.28.3343		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	30	30	Cemented Sand, light tan, sub-angular	○ Y ○ N	
30	40	10	Sandy Silt, light brown, sub-angular	○ Y ○ N	
40	60	20	Sandy clay, reddish brown	○ Y ○ N	
60	80	20	Silty Sand, light brown, sub-angular	○ Y ○ N	
80	250	170	Fine to Medium Sand, light tan, sub-angular to rounded	○ Y ○ N	
250	260	10	Clayey Sand, brown, sub-angular	○ Y ○ N	
260	320	60	Fine Sand, light tan, sub-angular	◉ Y ○ N	
320	380	60	Silty Sand, brownish gray, sub-angular	◉ Y ○ N	
380	410	30	Fine Sand, dark gray, sub-angular	◉ Y ○ N	
410	530	120	Clayey Fine Sand, dark gray, sub-angular	◉ Y ○ N	
530	590	60	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
590	600	10	Clayey Fine Sand, dark gray, sub-angular	◉ Y ○ N	
600	630	30	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
630	650	20	Clayey Sand, dark gray, sub-angular	◉ Y ○ N	
650	700	50	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
700	710	10	Clayey Sand, brown and gray, sub-angular	◉ Y ○ N	
710	760	50	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
760	770	10	Clay, 75% gray, 25% red	◉ Y ○ N	
770	780	10	Clay, 50% gray, 50% red	◉ Y ○ N	
780	790	10	Clay, 25% gray, 75% red	◉ Y ○ N	
790	805	15	Sandy Clay, Grayish red, 10% white sand.	◉ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ◉ OTHER – SPECIFY: TBD by pump test

TOTAL ESTIMATED WELL YIELD (gpm): TBD

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

Pump test will be performed at a later time.
Hydrated Bentonite Chips and Sand Mix Ready Mix were placed by gravity and tagged with tremie pipe.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Silverio Galindo, Gabriel Armijo, Pedro Pizano

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2015 FEB 19 PM 2 35

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Joel H. Stewart — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

2-13-15 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3632	POD NUMBER	POD 2	TRN NUMBER	555125
LOCATION	25.30.28.3343				PAGE 2 OF 2

Locator Tool Report

General Information:

Application ID:27 Date: 05-28-2015 Time: 12:01:24

WR File Number: C-03782-POD1
Purpose: POINT OF DIVERSION

Applicant First Name: BOPCO EXPLORATORY WELL DRILLERS RECORD
Applicant Last Name: RENUMBERED C-3832-POD2

GW Basin: CARLSBAD
County: EDDY

Critical Management Area Name(s): NONE
Special Condition Area Name(s): NONE
Land Grant Name: NON GRANT

PLSS Description (New Mexico Principal Meridian):

SW 1/4 of SE 1/4 of SW 1/4 of SW 1/4 of Section 28, Township 25S, Range 30E.

Coordinate System Details:

Geographic Coordinates:

Latitude:	32 Degrees	5 Minutes	40.1 Seconds	N
Longitude:	103 Degrees	53 Minutes	32.2 Seconds	W

Universal Transverse Mercator Zone: 13N

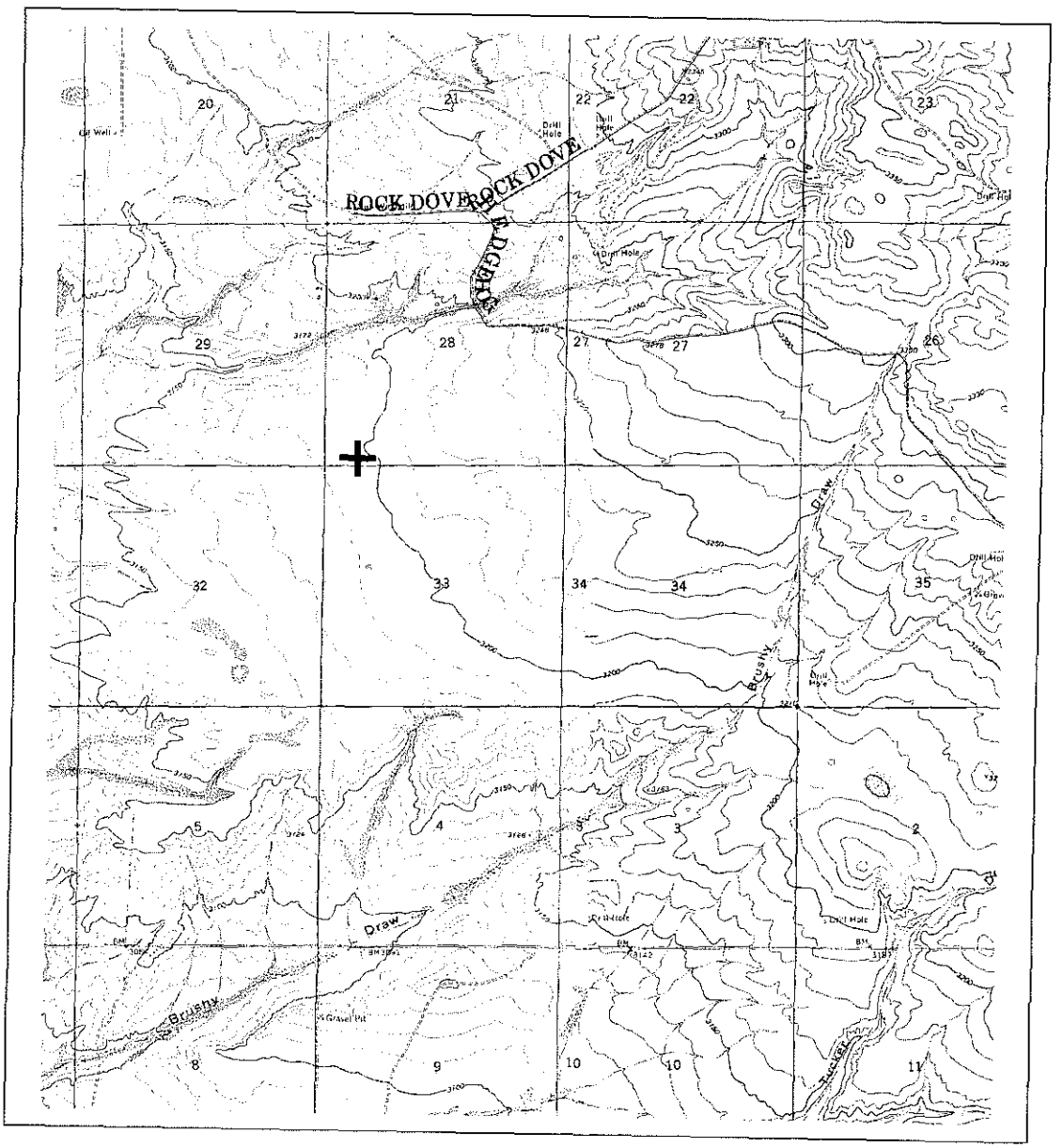
NAD 1983(92) (Meters)	N: 3,551,444	E: 604,526
NAD 1983(92) (Survey Feet)	N: 11,651,697	E: 1,983,348
NAD 1927 (Meters)	N: 3,551,243	E: 604,573
NAD 1927 (Survey Feet)	N: 11,651,036	E: 1,983,505

State Plane Coordinate System Zone: New Mexico East

NAD 1983(92) (Meters)	N: 121,428	E: 206,630
NAD 1983(92) (Survey Feet)	N: 398,385	E: 677,920
NAD 1927 (Meters)	N: 121,410	E: 194,077
NAD 1927 (Survey Feet)	N: 398,327	E: 636,734

NEW MEXICO OFFICE OF STATE ENGINEER

Locator Tool Report



WR File Number: C-03782-POD1 Scale: 1:47,832

Northing/Easting: UTM83(92) (Meter): N: 3,551,444 E: 604,526

Northing/Easting: SPCS83(92) (Feet): N: 398,385 E: 677,920

GW Basin: Carlsbad

Print Date: 05/28/2015

U.S. Fish and Wildlife Service
National Wetlands Inventory

Intermittent 720 feet

December 11, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Pond 16,426 feet

December 11, 2024

Wetlands

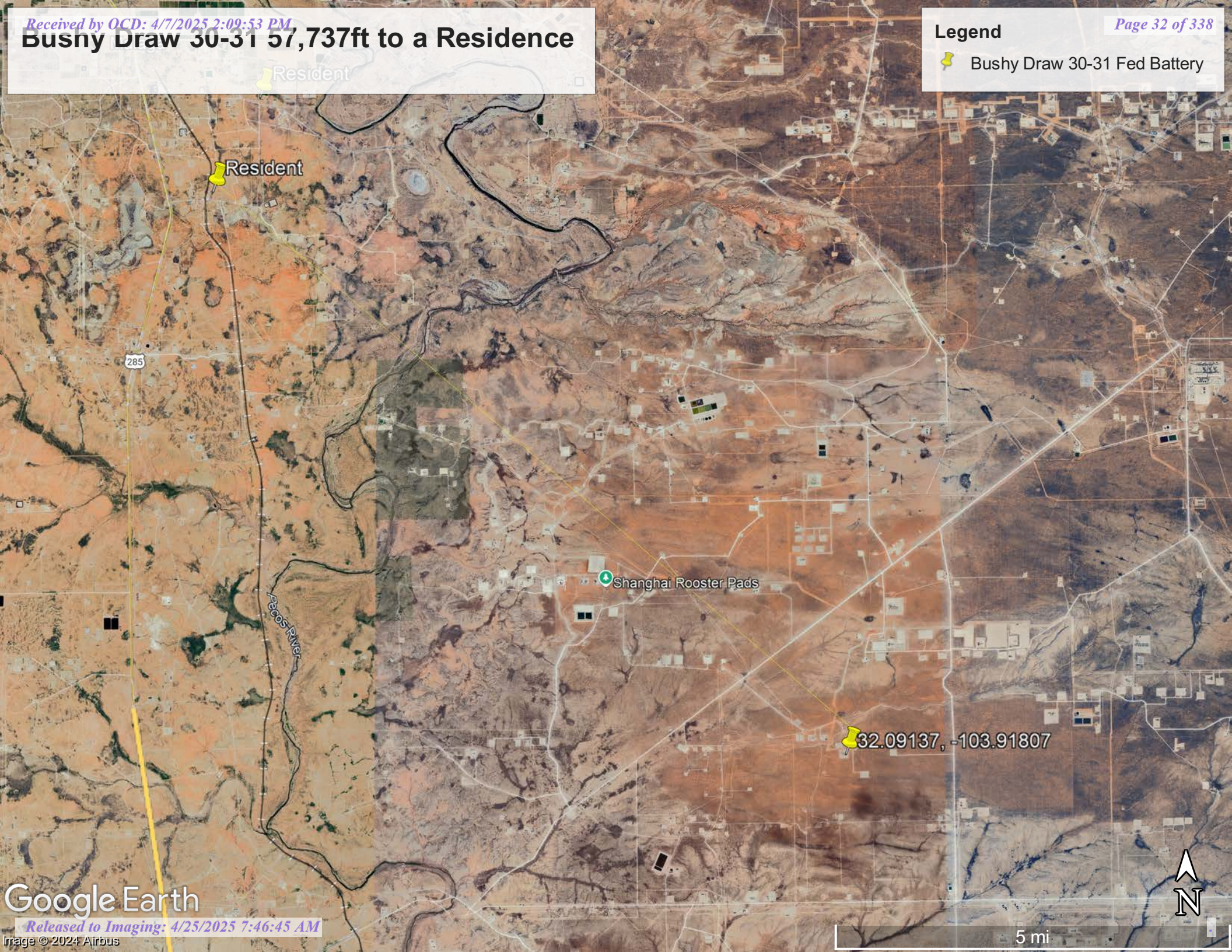
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Bushy Draw 30-31 57,737ft to a Residence

Legend

Bushy Draw 30-31 Fed Battery



Active & Inactive Points of Diversion

(with Ownership Information)

			(acre ft per annum)					(R=POD has been replaced and no longer serves this file, C=the file is closed)			(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)			(meters)
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tws	Range	X	Y	Map	Distance
C 04394	CUB	MON	0.000	XTO ENERGY INC	ED	C 04394 POD1	NA				SW	NE	SE	19	25S	30E	602315.9	3553464.1		2,342.6
C 03782	CUB	EXP	0.000	BOPCO, L.P.	ED	C 03782 POD1				Artesian	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2,522.1
C 01360	CUB	IND	0.000	EL PASO NATURAL GAS	ED	C 01360				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
C 03448	C	PRO	0.000	DEVON ENERGY CORP.	ED	C 01360				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
C 03449	C	PRO	0.000	OGX RESOURCES	ED	C 01360				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
C 04705	CUB	MON	0.000	DEVON ENERGY	ED	C 04705 POD1	NA				NE	NW	NE	35	25S	29E	598866.5	3551191.8		3,155.9
C 01361	CUB	IND	0.000	EL PASO NATURAL GAS	ED	C 01361				Shallow	SW	SE	SW	05	26S	30E	603240.4	3548157.5		3,221.8
C 03581	CUB	EXP	0.000	JANEY LOREE PASCHAL	ED	C 03581 POD1				Shallow	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
C 03608	C	PRO	0.000	DEVON ENERGY CORP.	ED	C 03581 POD1				Shallow	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
C 04612	C	STK	3.000	JANEY LOREE PASCHALL DBA PASCHAL RANCH LLC	ED	C 04612 C-3581	NA				SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
C 03483	C	STK	3.000	PASCHAL RANCH LLC	ED	C 03483				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
C 03501	C	PRO	0.000	DEVON ENERGY CO.	ED	C 03483				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
C 03502	C	PRO	0.000	DEVON ENERGY CO	ED	C 03483				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
C 03503	C	PRO	0.000	DEVON ENERGY CO.	ED	C 03483				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
C 03483	C	STK	3.000	PASCHAL RANCH LLC	ED	C 03483 POD3					SE	SW	SW	04	26S	30E	604557.8	3548291.0		3,814.1
					ED	C 03483 POD2						SW	SW	04	26S	30E	604565.8	3548253.6		3,847.4
C 04851	CUB	MON	0.000	COG OPERATING LLC	ED	C 04851 POD1	NA				NW	NE	NW	24	25S	29E	599946.3	3554519.9		3,966.4
C 02441	C	STK	0.000	BYRON W PASCHAL	ED	C 02441								21	25S	30E	605077.0	3553783.0 *		4,039.6
C 04758	CUB	MON	0.000	XTO ENERGY, INC.	ED	C 04758 POD1	NA				SE	SE	SE	17	25S	30E	604096.5	3554651.8		4,078.8
C 04558	CUB	MON	0.000	XTO ENERGY INC	ED	C 04558 POD1	NA				SW	SE	SW	23	25S	29E	598353.7	3553039.4		4,130.9
C 04730	CUB	MON	0.000	XTO ENERGY, INC	ED	C 04730 POD1	NA				SW	SW	NW	27	25S	30E	606032.8	3552256.2		4,163.2
C 04529	CUB	MON	0.000	XTO ENERGY INC	ED	C 04529 POD1	NA				NW	SW	NW	18	25S	30E	601076.9	3555733.7		4,689.9
C 04755	CUB	MON	0.000	DEVON ENERGY	ED	C 04755 POD2	NA				SE	NW	SW	12	26S	29E	599857.0	3546955.1		4,711.8
C 04720	CUB	EXP	0.000	DEVON ENERGY	ED	C 04720 POD1	NA				SE	NW	SW	12	26S	29E	599807.3	3546968.8		4,722.7
C 04755	CUB	MON	0.000	DEVON ENERGY	ED	C 04755 POD1	NA				SE	NW	SW	12	26S	29E	599787.4	3546971.4		4,729.8
C 04720	CUB	EXP	0.000	DEVON ENERGY	ED	C 04720 POD4	NA				SE	NW	SW	12	26S	29E	599812.4	3546955.0		4,732.5
					ED	C 04720 POD2	NA				SE	NW	SW	12	26S	29E	599835.7	3546932.1		4,742.0
					ED	C 04720 POD3	NA				SE	NW	SW	12	26S	29E	599835.7	3546932.1		4,742.0
					ED	C 04720 POD5	NA				SE	NW	SW	12	26S	29E	599840.0	3546920.4		4,750.4
					ED	C 04720 POD6	NA				SE	NW	SW	12	26S	29E	599857.7	3546880.9		4,777.5
C 04755	CUB	MON	0.000	DEVON ENERGY	ED	C 04755 POD3	NA				SE	NW	SW	12	26S	29E	599747.8	3546862.3		4,844.7

Record Count: 31

Filters Applied:

UTM Filters (in meters):
Easting: 602022
Northing: 3551140

Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest

NAD83 UTM in meters

Well Tag	POD Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	C 01360	SE	SW	SW	05	26S	30E	602996.6	3548152.0	

* UTM location was derived from PLSS - see Help

Driller License:	95	**Driller Company:**	FOLK DRILLING CO.		
Driller Name:					
Drill Start Date:	1952-04-26	**Drill Finish Date:**	1952-05-15	**Plug Date:**	
Log File Date:	1953-11-17	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	12.75	**Depth Well:**	770	**Depth Water:**	173

Water Bearing Stratifications:

Top	Bottom	Description
210	220	Sandstone/Gravel/Conglomerate
580	585	Sandstone/Gravel/Conglomerate
665	710	Sandstone/Gravel/Conglomerate
725	770	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
180	289
538	770

Meter Information

Meter Number:	16557	**Meter Make:**	SIEMENS
Meter Serial Number:	L1254823	**Meter Multiplier:**	100.0000
Number of Dials:	8	**Meter Type:**	Diversion
Unit of Measure:	Gallons	**Reading Frequency:**	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2014-07-01	2014	234997.000	A	RPT		0.000	
2014-09-30	2014	354169.000	A	RPT		36.573	
2014-11-20	2014	7281000.000	A	RPT		0.000	
2014-12-31	2014	11430100.000	A	RPT		12.733	
2015-04-01	2015	22535200.000	A	RPT		34.080	
2015-07-01	2015	35821800.000	A	RPT		40.775	
2015-10-05	2015	46631200.000	A	RPT		33.173	
2015-12-31	2015	55653200.000	A	RPT		27.688	
2016-01-31	2016	58047600.000	A	RPT		7.348	
2016-02-29	2016	61081100.000	A	RPT		9.309	
2016-03-31	2016	62593100.000	A	RPT		4.640	
2016-06-30	2016	71642600.000	A	RPT		27.772	
2016-10-03	2016	81998399.000	A	RPT		31.781	
2016-12-31	2016	90558600.000	A	RPT		26.270	
2019-04-04	2019	164290087.000	A	RPT		226.274	
2019-10-02	2019	790380.000	A	RPT	METER CHANGE OUT 07/2019	0.000	
2020-01-02	2020	1733720.000	A	RPT		289.500	
2021-04-07	2021	36814117.000	A	WEB		10765.779	X
2021-07-27	2021	36836238.000	A	WEB		6.789	X
2021-10-04	2021	36844496.000	A	WEB		2.534	X
2021-12-31	2021	36847463.000	A	WEB		0.911	X

YTD Meter Amounts:

Year	Amount
2014	49.306
2015	135.716
2016	107.120

Year	Amount
2019	226.274
2020	289.500
2021	10776.013

Meter Information

Meter Number:	16558	**Meter Make:**	MASTERMETER
Meter Serial Number:	32530403	**Meter Multiplier:**	100.0000
Number of Dials:	6	**Meter Type:**	Diversion
Unit of Measure:	Gallons	**Reading Frequency:**	Monthly (No Reading Expected)

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2014-10-01	2014	354169.000	A	RPT		0.000	
2014-11-20	2014	415555.000	A	RPT		18.839	
2014-11-21	2014	72810.000	A	RPT		0.000	
2014-12-31	2014	112178.000	A	RPT		12.082	
2015-02-01	2015	147039.000	A	RPT		10.698	
2015-03-02	2015	188133.000	A	RPT		12.611	
2015-04-01	2015	224102.000	A	RPT		11.038	
2015-04-30	2015	270723.000	A	RPT		14.307	
2015-05-31	2015	315628.000	A	tw		13.781	
2015-07-01	2015	369075.000	A	tw		16.402	
2015-08-01	2015	395528.000	A	tw		8.118	
2015-08-31	2015	455361.000	A	tw		18.362	
2015-10-01	2015	466312.000	A	RPT		3.361	

YTD Meter Amounts:

Year	Amount
2014	30.921
2015	108.678

Water Right Summary

get image list

WR File Number:	C 01360	**Subbasin:**	CUB	**Cross Reference:**	
Primary Purpose:	IND INDUSTRIAL				
Primary Status:	DCL Declaration				
Total Acres:	0.000	**Subfile:**		**Header:**	
Total Diversion:	0.000	**Cause/Case:**			
Owner:	EL PASO NATURAL GAS				
Contact:	PAULA JOY				

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
	460091	COWNF	2010-05-26	CHG	PRC	C 01360	T	0.000	0.000	
	203459	DCL	1953-11-17	DCL	PRC	C 01360	T	0.000	0.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 01360		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

*** UTM location was derived from PLSS - see Help**

Place of Use

Q256	Q64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0.000	0.000		IND		DCL	NO PLACE OF USE GIVEN.

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0.000	0.000		IND		GW	

Water Right Summary

get image list

WR File Number:	C 03448	**Subbasin:**	C	**Cross Reference:**
Primary Purpose:	PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE			
Primary Status:	PMT Permit			
Total Acres:		**Subfile:**		**Header:**
Total Diversion:	0.000	**Cause/Case:**		
Owner:	DEVON ENERGY CORP.			
Contact:	SCOTT GREGORY			

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	461570	72121	2010-06-29	PMT	APR	C 03448	T		3.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 01360		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

*** UTM location was derived from PLSS - see Help**

Water Right Summary

get image list

WR File Number:	C 03449	**Subbasin:**	C	**Cross Reference:**
Primary Purpose:	PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE			
Primary Status:	PMT Permit			
Total Acres:		**Subfile:**		**Header:**
Total Diversion:	0.000	**Cause/Case:**		
Owner:	OGX RESOURCES			
Contact:	SCOTT GREGORY			

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	461594	72121	2010-06-29	EXP	EXP	C 03449	T		3.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 01360		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

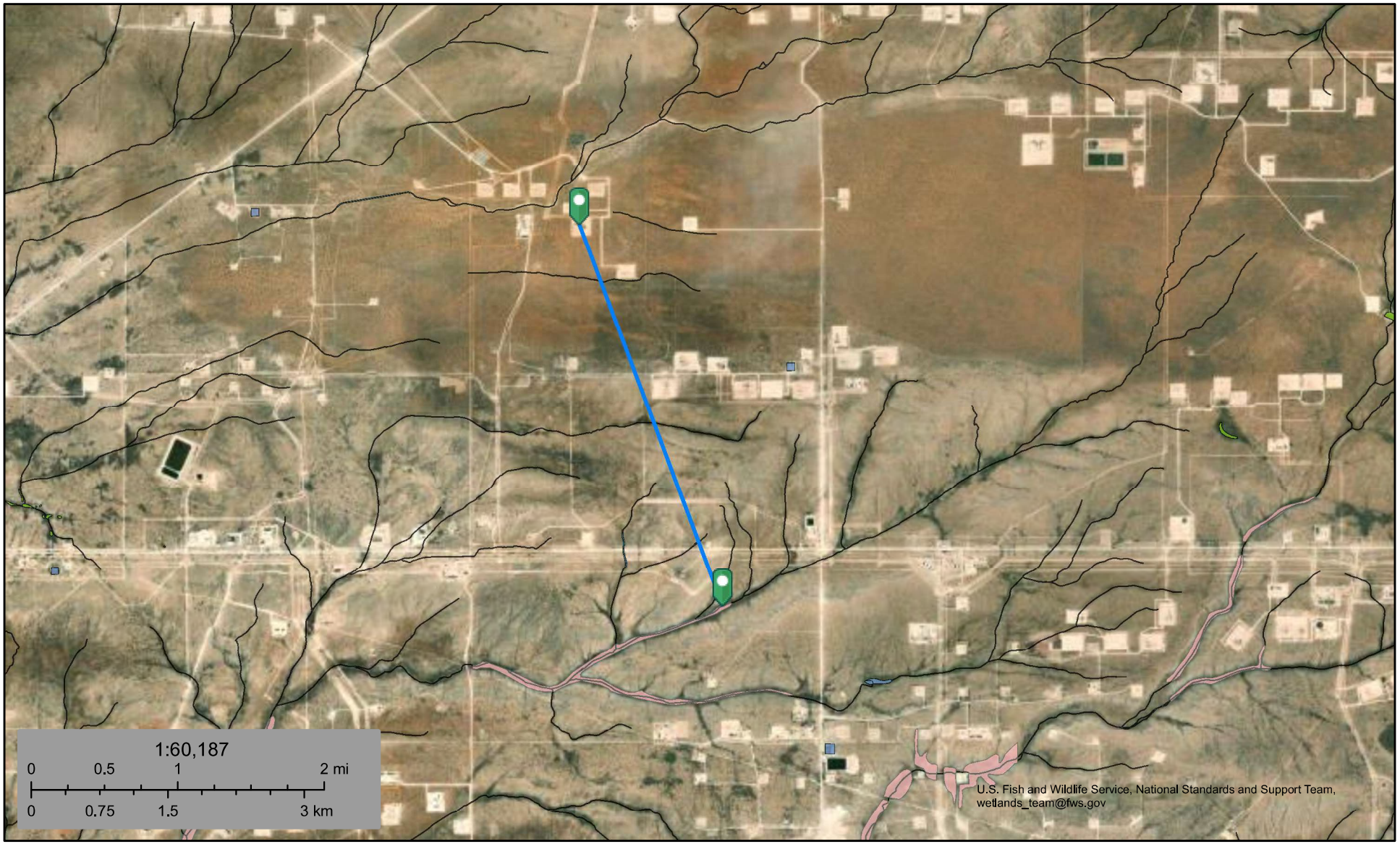
*** UTM location was derived from PLSS - see Help**

12/11/24 8:08 AM MST **Water Rights Summary**

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetland 12,393 feet



December 11, 2024

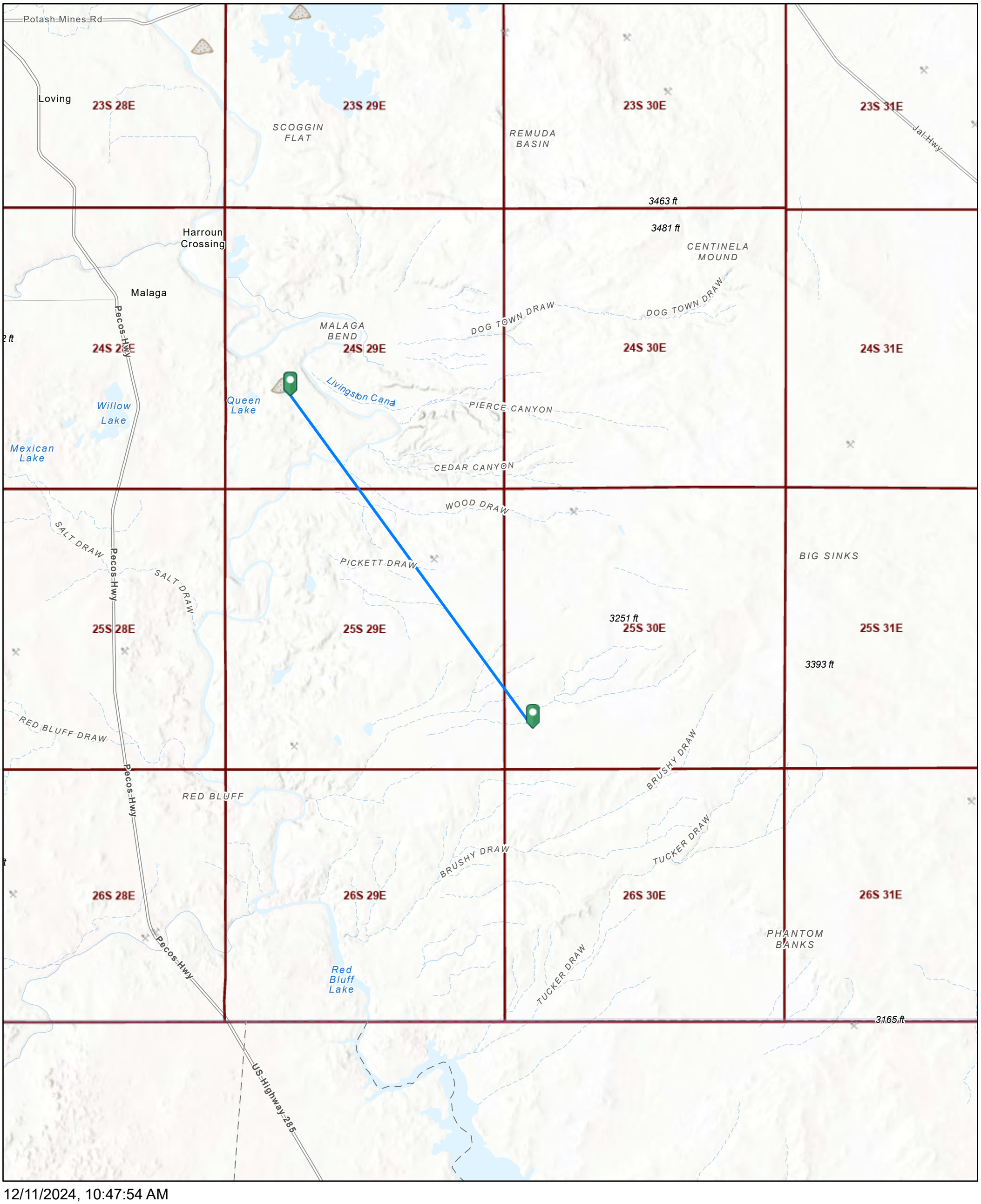
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Salt Mine 46,820 feet



12/11/2024, 10:47:54 AM

Registered Mines

- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Salt
- PLSS Townships

1:144,448

0 1.25 2.5 5 mi

0 2.25 4.5 9 km

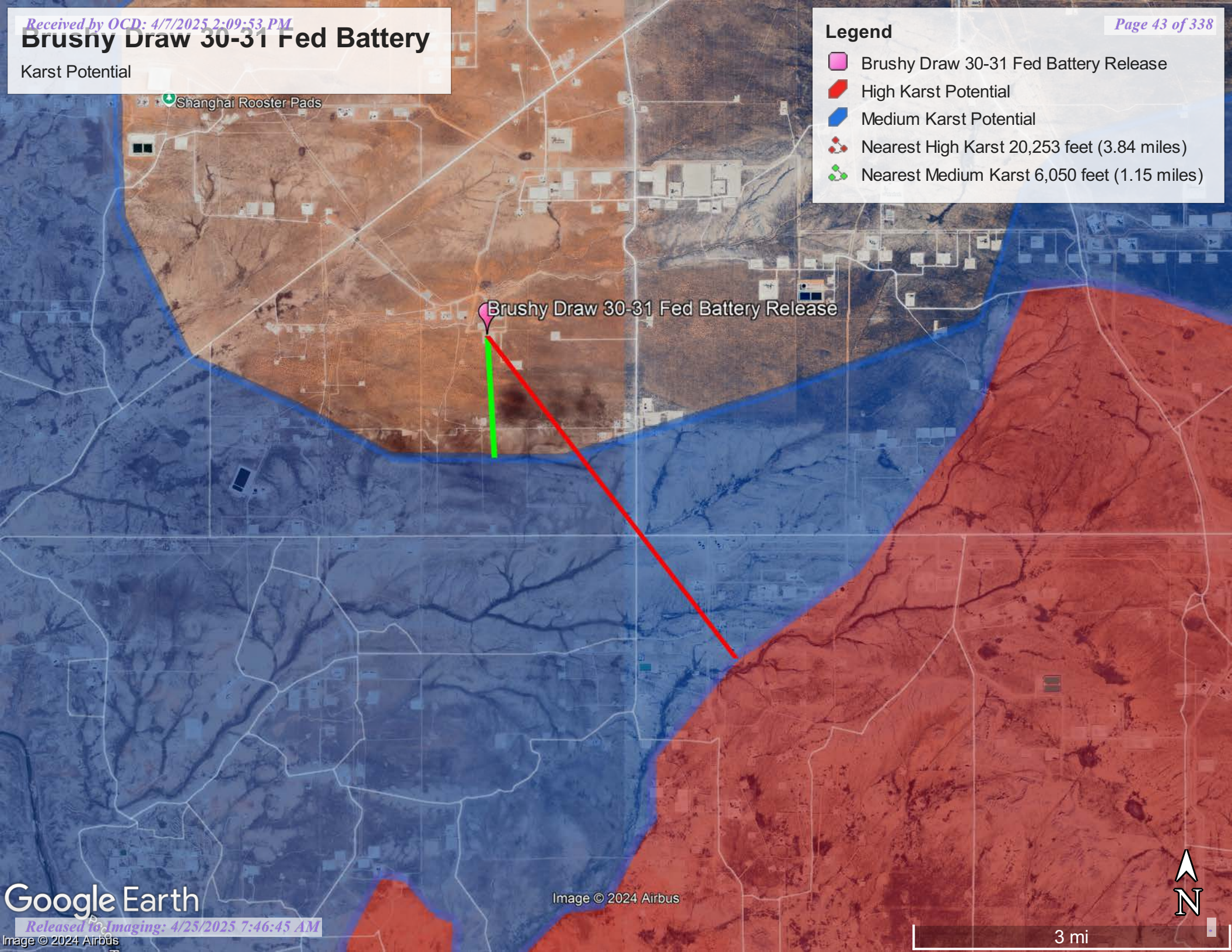
Esri, NASA, NGA, USGS, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, BLM

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)

Brushy Draw 30-31 Fed Battery

Karst Potential



Legend

- Brushy Draw 30-31 Fed Battery Release
- High Karst Potential
- Medium Karst Potential
- Nearest High Karst 20,253 feet (3.84 miles)
- Nearest Medium Karst 6,050 feet (1.15 miles)

National Flood Hazard Layer FIRMette

FEMA

103°55'24"W 32°5'44"N

103°54'46"W 32°5'14"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

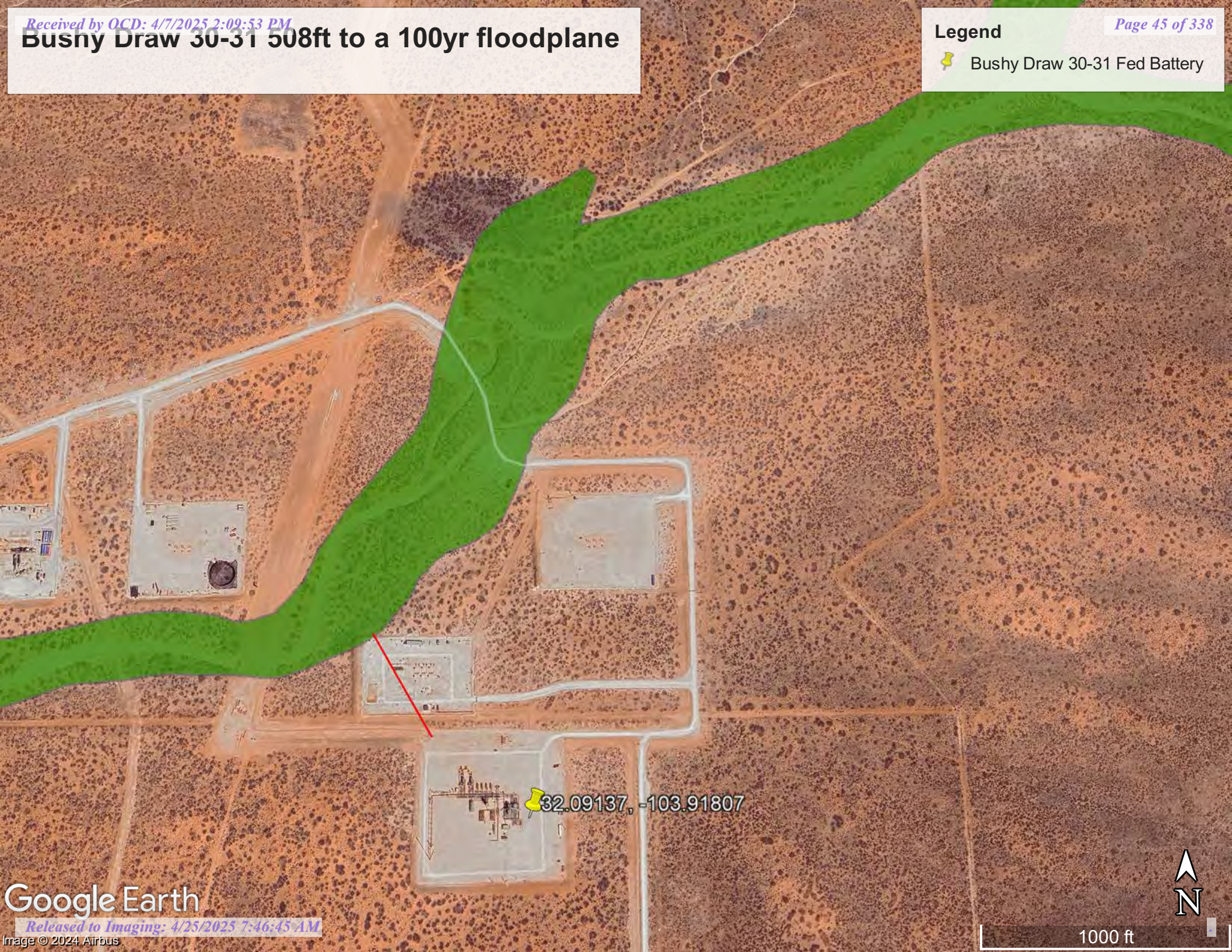
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/18/2024 at 8:49 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Bushy Draw 30-31 508ft to a 100yr floodplane

Legend

Bushy Draw 30-31 Fed Battery



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico

November 18, 2024

Custom Soil Resource Report
Soil Map (11. Bushy Draw 30-31 Soil Type)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 20, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (11. Bushy Draw 30-31 Soil Type)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BB	Berino complex, 0 to 3 percent slopes, eroded	3.7	100.0%
Totals for Area of Interest		**3.7**	**100.0%**

Map Unit Descriptions (11. Bushy Draw 30-31 Soil Type)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eddy Area, New Mexico

BB—Berino complex, 0 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1w43
Elevation: 2,000 to 5,700 feet
Mean annual precipitation: 5 to 15 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 60 percent
Pajarito and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains, fan piedmonts
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 58 inches: sandy clay loam
H3 - 58 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Pajarito

Setting

Landform: Dunes, plains, interdunes
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Pajarito

Percent of map unit: 4 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 4 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Cacique

Percent of map unit: 4 percent
Ecological site: R070BD004NM - Sandy
Hydric soil rating: No

Kermit

Percent of map unit: 3 percent
Ecological site: R070BD005NM - Deep Sand
Hydric soil rating: No

Soil Information for All Uses

Ecological Sites

Individual soil map unit components can be correlated to a particular ecological site. The Ecological Site Assessment section includes ecological site descriptions, plant growth curves, state and transition models, and selected National Plants database information.

All Ecological Sites — (12. Bushy Draw 30-31 Ecological)

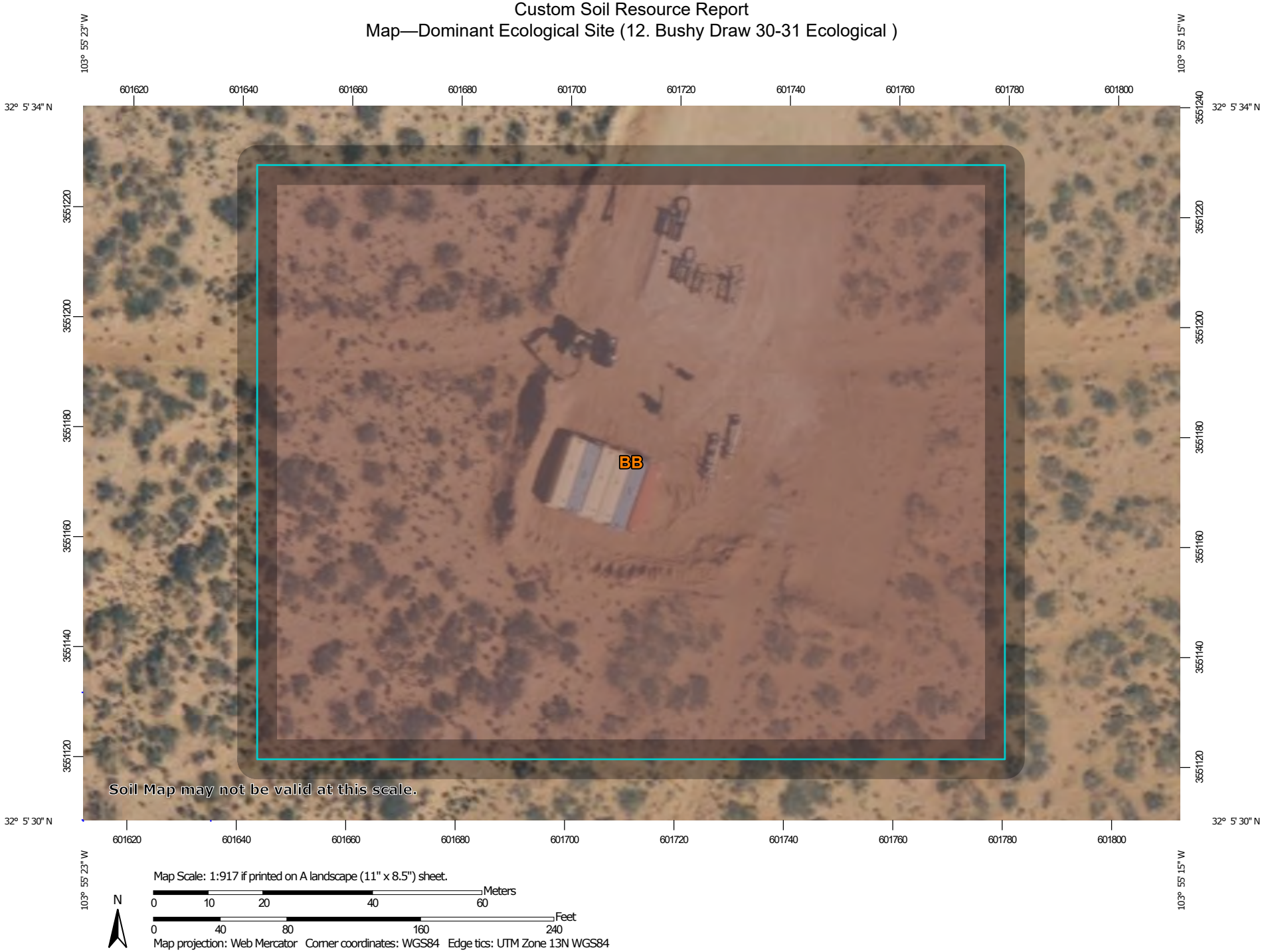
An "ecological site" is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. For example, the hydrology of the site is influenced by development of the soil and plant community. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production.

An ecological site name provides a general description of a particular ecological site. For example, "Loamy Upland" is the name of a rangeland ecological site. An "ecological site ID" is the symbol assigned to a particular ecological site.

The map identifies the dominant ecological site for each map unit, aggregated by dominant condition. Other ecological sites may occur within each map unit. Each map unit typically consists of one or more components (soils and/or miscellaneous areas). Each soil component is associated with an ecological site. Miscellaneous areas, such as rock outcrop, sand dunes, and badlands, have little or no soil material and support little or no vegetation and therefore are not linked to an ecological site. The table below the map lists all of the ecological sites for each map unit component in your area of interest.

Custom Soil Resource Report

Map—Dominant Ecological Site (12. Bushy Draw 30-31 Ecological)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- R070BD003NM
- Not rated or not available

Soil Rating Lines
- R070BD003NM
- Not rated or not available

Soil Rating Points
- R070BD003NM
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 20, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Ecological Sites by Map Unit Component (12. Bushy Draw 30-31 Ecological)

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
BB	Berino complex, 0 to 3 percent slopes, eroded	Berino (60%)	R070BD003NM — Loamy Sand	3.7	100.0%
		Pajarito (25%)	R070BD003NM — Loamy Sand		
		Cacique (4%)	R070BD004NM — Sandy		
		Pajarito (4%)	R070BD003NM — Loamy Sand		
		Wink (4%)	R070BD003NM — Loamy Sand		
		Kermit (3%)	R070BD005NM — Deep Sand		
Totals for Area of Interest				**3.7**	**100.0%**

USDA Natural Resources Conservation Service

Ecological site R070BD003NM
Loamy Sand

Accessed: 09/02/2024

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Associated sites

R070BD004NM	**Sandy** Sandy
R070BD005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	0–9%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes.

The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced from water from wetlands or streams.

Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:
Maljamar
Berino
Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid

Soil depth	40–72 in
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–7 in
Calcium carbonate equivalent (0-40in)	3–40%
Electrical conductivity (0-40in)	2–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

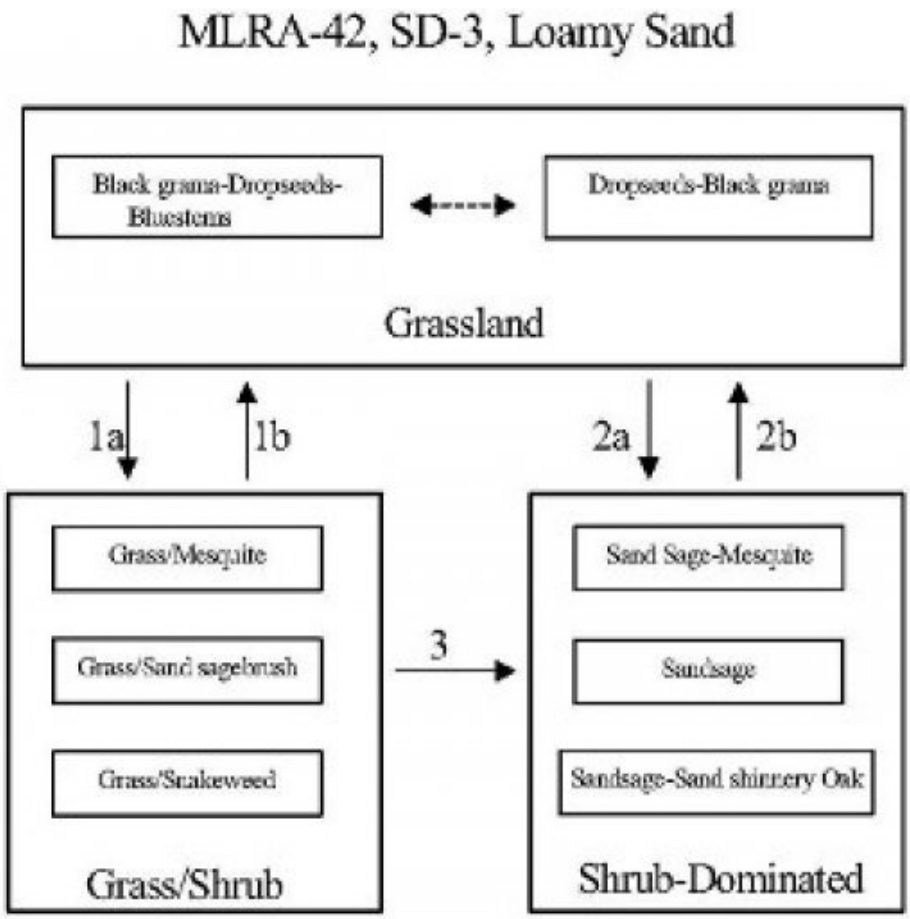
Overview

The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):



1a. Drought, over grazing, fire suppression.
1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.
2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil

surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species. Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	442	833	1224
Forb	110	208	306
Shrub/Vine	98	184	270
Total	**650**	**1225**	**1800**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971). Diagnosis: This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution. Transition to Grass/Shrub State (1a): The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984). Key indicators of approach to transition: • Loss of black grama cover • Surface soil erosion • Bare patch expansion • Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances Transition to Historic Plant Community (1b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an

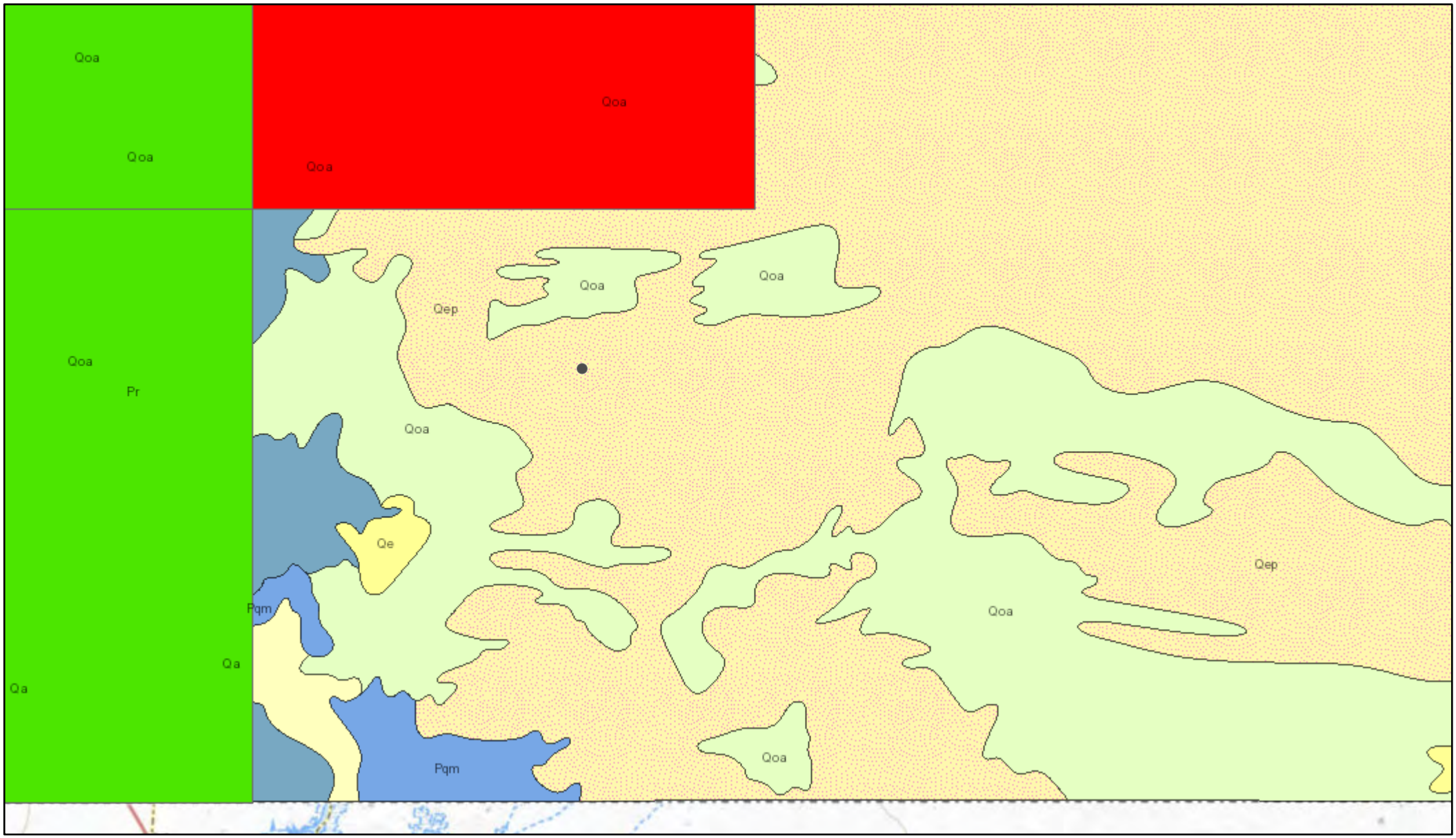
aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state. Key indicators of approach to transition: • Severe loss of grass species cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite abundance Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state. Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite. Key indicators of approach to transition: • Continual loss of dropseeds/threeawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threeawn and mesquite/snakeweed abundance

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			61–123	
	little bluestem	SCSC	*Schizachyrium scoparium*	61–123	–
2	**Warm Season**			37–61	
	sand bluestem	ANHA	*Andropogon hallii*	37–61	–
3	**Warm Season**			37–61	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	37–61	–
	silver bluestem	BOSA	*Bothriochloa saccharoides*	37–61	–
4	**Warm Season**			123–184	
	black grama	BOER4	*Bouteloua eriopoda*	123–184	–
	bush muhly	MUPO2	*Muhlenbergia porteri*	123–184	–
5	**Warm Season**			123–184	
	thin paspalum	PASE5	*Paspalum setaceum*	123–184	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	123–184	–
	fringed signalgrass	URCI	*Urochloa ciliatissima*	123–184	–
6	**Warm Season**			123–184	
	spike dropseed	SPCO4	*Sporobolus contractus*	123–184	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	123–184	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	123–184	–
7	**Warm Season**			61–123	
	hooded windmill grass	CHCU2	*Chloris cucullata*	61–123	–
	Arizona cottontop	DICA8	*Digitaria californica*	61–123	–
9	**Other Perennial Grasses**			37–61	
	Grass, perennial	2GP	*Grass, perennial*	37–61	–
Shrub/Vine					
8	**Warm Season**			37–61	
	New Mexico feathergrass	HENE5	*Hesperostipa neomexicana*	37–61	–
	giant dropseed	SPGI	*Sporobolus giganteus*	37–61	–
10	**Shrub**			61–123	

13. Bushy Draw 30-31 Geology



11/18/2024, 2:41:54 PM

Lithologic Units

- Playa——Alluvium and evaporite deposits (Holocene)
- Water——Perenial standing water
- Qa——Alluvium (Holocene to upper Pleistocene)

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Esri, NASA, NGA, USGS, NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

APPENDIX B – Daily Field and Sampling Report(s)

APPENDIX C – Laboratory Data Report(s) and Chain of Custody Form(s)

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 19, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/17/25 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER'	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 01 1.5' (H250927-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	190	94.8	200	8.81	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *83.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *79.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 02 1.5' (H250927-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	190	94.8	200	8.81	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *72.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *69.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 03 1.5' (H250927-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	190	94.8	200	8.81	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *90.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 04 1.5' (H250927-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *80.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *78.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 05 1.5' (H250927-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *86.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *84.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 06 1.5' (H250927-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.20	110	2.00	1.89	
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *88.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 07 1.5' (H250927-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *90.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.8 %* *49.1-148*

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 08 1.5' (H250927-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *85.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *83.9 %* *49.1-148*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 09 1.5' (H250927-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *94.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.0 %* *49.1-148*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 10 1.5' (H250927-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *88.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.1 %* *49.1-148*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 11 1.5' (H250927-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *88.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.7 %* *49.1-148*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 12 1' (H250927-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *88.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.0 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 13 1' (H250927-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *93.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.4 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 14 1' (H250927-14)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *81.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *80.3 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 01 0-1.5' (H250927-15)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *85.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 02 0-1.5' (H250927-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6700**	16.0	02/18/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *86.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *84.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 03 0-1.5' (H250927-17)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *83.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 04 0-1.5' (H250927-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *108 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 05 0-1.5' (H250927-19)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/17/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 06 0-1.5' (H250927-20)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/18/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/18/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/18/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/18/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *113 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 07 0-1' (H250927-21)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2025	ND	2.05	102	2.00	4.78	
Toluene*	<0.050	0.050	02/18/2025	ND	2.13	107	2.00	4.55	
Ethylbenzene*	<0.050	0.050	02/18/2025	ND	2.10	105	2.00	4.72	
Total Xylenes*	<0.150	0.150	02/18/2025	ND	6.17	103	6.00	4.59	
Total BTEX	<0.300	0.300	02/18/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	182	90.9	200	4.60	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	179	89.4	200	5.41	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *114 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

48-hour Rush

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)
Project Manager: Chad Hensley
Address: 3101 Boyd Drive
City: Carlsbad State: NM Zip: 88220
Phone #: 575.725.5001 Fax #:
Project #: 25E-00017 Project Owner: Colton Brown
Project Name: Brushy Draw 30-31 Federal Battery - South
Project Location:
Sampler Name: L. Pullman

BILL TO
P.O. #:
Company: XTO Energy, Inc.
Attn: Colton Brown
Address: 3104 E. Greene St
City: Carlsbad
State: NM Zip: 88220
Phone #: 575-988-2390
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL ✓	OTHER:	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H250927 1	BS25-01 1.5'	C	1			X							02.15.25	8:20	X	X	X
2	BS25-02 1.5'	C	1			X							02.15.25	8:25	X	X	X
3	BS25-03 1.5'	C	1			X							02.15.25	8:45	X	X	X
4	BS25-04 1.5'	C	1			X							02.15.25	8:50	X	X	X
5	BS25-05 1.5'	C	1			X							02.15.25	9:10	X	X	X
6	BS25-06 1.5'	C	1			X							02.15.25	9:15	X	X	X
7	BS25-07 1.5'	C	1			X							02.15.25	9:20	X	X	X
8	BS25-08 1.5'	C	1			X							02.15.25	9:25	X	X	X
9	BS25-09 1.5'	C	1			X							02.15.25	8:20	X	X	X
10	BS25-10 1.5'	C	1			X							02.15.25	8:15	X	X	X

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Relinquished By: [signature] Date: 2-17-25 Time: 08:30 Received By: [signature]
Relinquished By: Date: 1230 Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2500254282

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C 3.7
Corrected Temp. °C 4.0

Sample Condition
Cool Intact
☑ Yes ☑ Yes
☐ No ☐ No

CHECKED BY: (Initials) [initials]

Turnaround Time: Standard ☐ Rush ☒ 48hr
Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C
☐ Yes ☐ Yes
☐ No ☐ No Corrected Temp. °C
Thermometer ID ~~#113~~ #140
Correction Factor ~~-0.5°C~~ +0.3°C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

1/2

48-hour Rush

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL Laboratories
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)	BILL TO
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: XTO Energy, Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery - South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: L. Pullman	Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL ✓	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H250937																	
11	BS25-11 1.5'	C	1			X							02.15.25	8:40	X	X	X
12	BS25-12 1'	C	1			X							02.15.25	9:35	X	X	X
13	BS25-13 1'	C	1			X							02.15.25	9:40	X	X	X
14	BS25-14 1'	C	1			X							02.15.25	9:45	X	X	X
15	WS25-01 0-1.5'	C	1			X							02.15.25	8:10	X	X	X
16	WS25-02 0-1.5'	C	1			X							02.15.25	8:30	X	X	X
17	WS25-03 0-1.5'	C	1			X							02.15.25	8:35	X	X	X
18	WS25-04 0-1.5'	C	1			X							02.15.25	8:55	X	X	X
19	WS25-05 0-1.5'	C	1			X							02.15.25	9:00	X	X	X
20	WS25-06 1-1.5'	C	1			X							02.15.25	9:05	X	X	X

Relinquished By: Lakin Pullman	Date: 2-17-2025	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No
	Time: 09:30		Add'l Phone #:
Relinquished By:	Date: 1230	Received By:	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
	Time:		REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2500254282

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.7 Corrected Temp. °C 4.0	Sample Condition Cool ☑ Yes Intact ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) JO	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush: 48 hr ☑ Cool Intact Observed Temp. °C Thermometer ID ~~#113~~ #140 Correction Factor ~~-0.5°C~~ +0.3° ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

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† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

2/3

48-hour Rush

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)	**BILL TO**
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: XTO Energy, Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery – South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: L. Pullman	Fax #:

ANALYSIS REQUEST

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H250927 21	WS25-07 0-1'	C	1			X					✓		02.15.25	9:30	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [signature]	Date: 2-17-25 Time: 09:30	Received By: [signature]	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 1230 Time:	Received By:	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com) REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2500254282
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.7 Corrected Temp. °C 4.0	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

Turnaround Time: Standard ☐ Rush ☒ 48-hr
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C
Thermometer ID ~~#113~~ #140
Correction Factor ~~-0.5°~~ +0.3°c

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 24, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/20/25 14:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER'	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 15 1.5' (H251017-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *94.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 16 3' (H251017-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *95.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 17 3' (H251017-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *96.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.9 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 18 1.5' (H251017-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *96.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.9 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 19 1.5' (H251017-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *95.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 20 3' (H251017-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *93.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 08 0-1.5' (H251017-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *91.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.0 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 09 0-1.5' (H251017-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *93.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 10 0-3' (H251017-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	198	98.8	200	5.95	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	193	96.4	200	7.73	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *80.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *76.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 11 0-3' (H251017-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	2.05	102	2.00	1.39	
Toluene*	<0.050	0.050	02/21/2025	ND	2.21	111	2.00	0.446	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.26	113	2.00	0.0407	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.80	113	6.00	0.538	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1520**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	218	109	200	0.994	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	215	108	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *103 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 12 1.5-3' (H251017-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	1.85	92.7	2.00	0.794	
Toluene*	<0.050	0.050	02/21/2025	ND	2.10	105	2.00	7.79	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.31	116	2.00	10.1	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.98	116	6.00	10.9	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	218	109	200	0.994	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	215	108	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 13 1.5-3' (H251017-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	1.85	92.7	2.00	0.794	
Toluene*	<0.050	0.050	02/21/2025	ND	2.10	105	2.00	7.79	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.31	116	2.00	10.1	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.98	116	6.00	10.9	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	218	109	200	0.994	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	215	108	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 14 0-1.5' (H251017-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	1.85	92.7	2.00	0.794	
Toluene*	<0.050	0.050	02/21/2025	ND	2.10	105	2.00	7.79	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.31	116	2.00	10.1	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.98	116	6.00	10.9	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1360**	16.0	02/21/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	218	109	200	0.994	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	215	108	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *95.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/20/2025	Sampling Date:	02/19/2025
Reported:	02/24/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 15 0-3' (H251017-14)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2025	ND	1.85	92.7	2.00	0.794	
Toluene*	<0.050	0.050	02/21/2025	ND	2.10	105	2.00	7.79	
Ethylbenzene*	<0.050	0.050	02/21/2025	ND	2.31	116	2.00	10.1	
Total Xylenes*	<0.150	0.150	02/21/2025	ND	6.98	116	6.00	10.9	
Total BTEX	<0.300	0.300	02/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1260**	16.0	02/21/2025	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2025	ND	218	109	200	0.994	
DRO >C10-C28*	<10.0	10.0	02/21/2025	ND	215	108	200	6.03	
EXT DRO >C28-C36	<10.0	10.0	02/21/2025	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

48-hour Rush

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)	**BILL TO**
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: XTO Energy, Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery - South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: L. Pullman	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL ✓	OTHER:	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H25101																	
1	BS25-15 1.5'	C	1			X							02.19.25	9:20	X	X	X
2	BS25-16 3'	C	1			X							02.19.25	9:45	X	X	X
3	BS25-17 3'	C	1			X							02.19.25	9:50	X	X	X
4	BS25-18 1.5'	C	1			X							02.19.25	10:10	X	X	X
5	BS25-19 1.5'	C	1			X							02.19.25	10:15	X	X	X
6	BS25-20 3'	C	1			X							02.19.25	15:00	X	X	X
7	WS25-08 0-1.5'	C	1			X							02.19.25	9:15	X	X	X
8	WS25-09 0-1.5'	C	1			X							02.19.25	10:00	X	X	X
9	WS25-10 0-3'	C	1			X							02.19.25	9:35	X	X	X
10	WS25-11 0-3'	C	1			X							02.19.25	9:40	X	X	X

Relinquished By: Lakin Pullman	Date: 2-20-25	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 06:30		Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)	
Relinquished By:	Date: 1402	Received By:	REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2500254282	
	Time:			

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.8 Corrected Temp. °C 1.1	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush 48hr ☒ Cool Intact Observed Temp. °C Thermometer ID ~~#110~~ #140 Correction Factor ~~-0.6°C~~ +0.3° ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

1/2

48-hour Rush

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)	BILL TO
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: XTO Energy, Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery - South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: L. Pullman	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H25 1017																	
11	WS25-12 1.5-3'	C	1			X							02.19.25	9:25	X	X	X
12	WS25-13 1.5-3'	C	1			X							02.19.25	9:30	X	X	X
13	WS25-14 0-1.5'	C	1			X							02.19.25	10:05	X	X	X
14	WS25-15 0-3'	C	1			X							02.19.25	15:05	X	X	X

Relinquished By: Lakin Pullman	Date: 2-20-25 Time: 0630	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 1402 Time:	Received By:	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
			REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2500254282

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.8 Corrected Temp. °C 1.2	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush: Cool Intact Observed Temp. °C Thermometer ID #140 Correction Factor -0.5°C +0.3 Corrected Temp. °C 2/20/25 ☐ Yes ☐ Yes ☐ No ☐ No

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 12, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/10/25 12:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 21 3' (H251380-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *131 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *135 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 22 1' (H251380-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *126 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *125 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 23 1' (H251380-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *130 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *130 %* *40.6-153*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 24 1' (H251380-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *127 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 25 2' (H251380-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *117 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *129 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 26 1' (H251380-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *122 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *122 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 27 2' (H251380-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *134 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *142 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 28 3' (H251380-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *127 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 29 3' (H251380-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *131 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *132 %* *40.6-153*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 30 2' (H251380-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *131 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *137 %* *40.6-153*

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 31 2' (H251380-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *128 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 32 1.5' (H251380-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *133 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *135 %* *40.6-153*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 33 1.5' (H251380-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *134 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *134 %* *40.6-153*

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Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 34 1.5' (H251380-14)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2025	ND	1.98	99.0	2.00	1.71	
Toluene*	<0.050	0.050	03/10/2025	ND	2.05	102	2.00	1.93	
Ethylbenzene*	<0.050	0.050	03/10/2025	ND	2.06	103	2.00	2.09	
Total Xylenes*	<0.150	0.150	03/10/2025	ND	6.27	105	6.00	1.22	
Total BTEX	<0.300	0.300	03/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *139 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *139 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 35 1.5' (H251380-15)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.94	97.0	2.00	6.90	
Toluene*	<0.050	0.050	03/11/2025	ND	2.17	109	2.00	0.304	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.52	126	2.00	3.97	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	7.83	131	6.00	3.54	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *125 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	03/11/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *136 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *137 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 36 1.5' (H251380-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.94	97.0	2.00	6.90	
Toluene*	<0.050	0.050	03/11/2025	ND	2.17	109	2.00	0.304	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.52	126	2.00	3.97	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	7.83	131	6.00	3.54	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *129 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *137 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *137 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 37 1.5' (H251380-17)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.94	97.0	2.00	6.90	
Toluene*	<0.050	0.050	03/11/2025	ND	2.17	109	2.00	0.304	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.52	126	2.00	3.97	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	7.83	131	6.00	3.54	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *141 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/11/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/11/2025	ND					

Surrogate: 1-Chlorooctane *135 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *137 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 38 1.5' (H251380-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.94	97.0	2.00	6.90	
Toluene*	<0.050	0.050	03/11/2025	ND	2.17	109	2.00	0.304	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.52	126	2.00	3.97	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	7.83	131	6.00	3.54	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *134 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/11/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/11/2025	ND					

Surrogate: 1-Chlorooctane *139 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *141 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 - SOUTH	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BS 25 - 39 1.5' (H251380-19)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.90	95.2	2.00	3.59	
Toluene*	<0.050	0.050	03/11/2025	ND	2.05	103	2.00	0.986	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.28	114	2.00	0.648	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.92	115	6.00	0.254	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2025	ND	201	101	200	1.22	
DRO >C10-C28*	<10.0	10.0	03/11/2025	ND	195	97.4	200	0.278	
EXT DRO >C28-C36	<10.0	10.0	03/11/2025	ND					

Surrogate: 1-Chlorooctane *128 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *131 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to ExxonMobil Upstream Company)	**BILL TO**
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: ExxonMobil Upstream Company
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery - South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: A. Ludvik	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride	ANALYSIS REQUEST
H251380																		
1	BS25-21 3'	C	1			X							03.07.25	9:05	X	X	X	
2	BS25-22 1'	C	1			X							03.07.25	9:10	X	X	X	
3	BS25-23 1'	C	1			X							03.07.25	9:15	X	X	X	
4	BS25-24 1'	C	1			X							03.07.25	9:20	X	X	X	
5	BS25-25 2'	C	1			X							03.07.25	9:25	X	X	X	
6	BS25-26 1'	C	1			X							03.07.25	9:30	X	X	X	
7	BS25-27 2'	C	1			X							03.07.25	9:35	X	X	X	
8	BS25-28 3'	C	1			X							03.07.25	9:40	X	X	X	
9	BS25-29 3'	C	1			X							03.07.25	9:45	X	X	X	
10	BS25-30 2'	C	1			X							03.07.25	9:50	X	X	X	

Relinquished By:	Date: 3-10-25 Time: 07:30	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 1245 Time:	Received By:	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
			REMARKS: Direct Bill to ExxonMobil Upstream Company, Cost Center #: 2027691371, Incident #: nAPP2500254282

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.6 Corrected Temp. °C 2.9	Sample Condition Cool: Yes Intact: Yes / No No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush ☒ Cool Intact Observed Temp. °C 48hr Thermometer ID ~~#140~~ #140 Correction Factor ~~-0.5°C~~ +0.3° 3/10/25 ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2

Company Name: Vertex Resource Services (Direct Bill to ExxonMobil Upstream Company)		BILL TO	ANALYSIS REQUEST
Project Manager: Chad Hensley		P.O. #:	
Address: 3101 Boyd Drive		Company: ExxonMobil Upstream Company	
City: Carlsbad State: NM	Zip: 88220	Attn: Colton Brown	
Phone #: 575.725.5001	Fax #:	Address: 3104 E. Greene St	
Project #: 25E-00017	Project Owner: Colton Brown	City: Carlsbad	
Project Name: Brushy Draw 30-31 Federal Battery - South		State: NM Zip: 88220	
Project Location:		Phone #: 575-988-2390	
Sampler Name: A. Ludvik		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL ✓	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H251380																	
11	BS25-31 2'	C	1			X							03.07.25	9:55	X	X	X
12	BS25-32 1.5'	C	1			X							03.07.25	10:00	X	X	X
13	BS25-33 1.5'	C	1			X							03.07.25	10:05	X	X	X
14	BS25-34 1.5'	C	1			X							03.07.25	10:10	X	X	X
15	BS25-35 1.5'	C	1			X							03.07.25	10:15	X	X	X
16	BS25-36 1.5'	C	1			X							03.07.25	10:20	X	X	X
17	BS25-37 1.5'	C	1			X							03.07.25	10:25	X	X	X
18	BS25-38 1.5'	C	1			X							03.07.25	10:30	X	X	X
19	BS25-39 1.5'	C	1			X							03.07.25	10:35	X	X	X

Relinquished By:	Date: 3-10-25 Time: ~~07:30~~	Received By:	Verbal Result: ☐ Yes ☐ No — Add'l Phone #:
Relinquished By:	Date: 1245 Time:	Received By:	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
			REMARKS: Direct Bill to ExxonMobil Upstream Company, Cost Center #: 2027691371, Incident #: nAPP2500254282

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.6 Corrected Temp. °C 2.9	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush: ☒ 48hr Cool Intact Observed Temp. °C Thermometer ID ~~#113~~ #140 Correction Factor ~~0.5°C~~ +0.3°C 3/10/25 ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 12, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/10/25 12:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 16 0-3' (H251381-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	1.90	95.2	2.00	3.59	
Toluene*	<0.050	0.050	03/11/2025	ND	2.05	103	2.00	0.986	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.28	114	2.00	0.648	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.92	115	6.00	0.254	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *127 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *129 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 17 0-1' (H251381-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.3 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *114 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *116 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 18 0-1' (H251381-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.2 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *117 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *117 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 19 0-2' (H251381-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.2 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *125 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 20 0-3' (H251381-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.9 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *115 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *122 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 21 0-2' (H251381-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *124 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 22 0-1.5' (H251381-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.1 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *125 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *127 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/10/2025	Sampling Date:	03/07/2025
Reported:	03/12/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017 (SOUTH)	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 23 0-1.5' (H251381-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2025	ND	2.00	99.8	2.00	2.42	
Toluene*	<0.050	0.050	03/11/2025	ND	2.10	105	2.00	1.43	
Ethylbenzene*	<0.050	0.050	03/11/2025	ND	2.06	103	2.00	0.165	
Total Xylenes*	<0.150	0.150	03/11/2025	ND	6.06	101	6.00	0.0761	
Total BTEX	<0.300	0.300	03/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.5 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	03/11/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/10/2025	ND	195	97.6	200	1.83	
DRO >C10-C28*	<10.0	10.0	03/10/2025	ND	190	95.1	200	9.98	
EXT DRO >C28-C36	<10.0	10.0	03/10/2025	ND					

Surrogate: 1-Chlorooctane *123 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *126 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to ExxonMobil Upstream Company)	BILL TO
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: ExxonMobil Upstream Company
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery - South	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: A. Ludvik	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride	ANALYSIS REQUEST
H251381																		
1	WS25-16 0-3'	C	1			X							03.07.25	11:05	X	X	X	
2	WS25-17 0-1'	C	1			X							03.07.25	11:10	X	X	X	
3	WS25-18 0-1'	C	1			X							03.07.25	11:15	X	X	X	
4	WS25-19 0-2'	C	1			X							03.07.25	11:20	X	X	X	
5	WS25-20 0-3'	C	1			X							03.07.25	11:25	X	X	X	
6	WS25-21 0-2'	C	1			X							03.07.25	11:30	X	X	X	
7	WS25-22 0-1.5'	C	1			X							03.07.25	11:35	X	X	X	
8	WS25-23 0-1.5'	C	1			X							03.07.25	11:40	X	X	X	

Relinquished By:	Date: 3-10-25	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 07:30		Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
Relinquished By:	Date: 13:45	Received By:	REMARKS: Direct Bill to ExxonMobil Upstream Company, Cost Center #: 2027691371, Incident #: nAPP2500254282
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.4 Corrected Temp. °C 2.9	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush: 48hr ☒ Cool Intact Observed Temp. °C Thermometer ID #140 Correction Factor -0.5°C +0.3°C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 27, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/21/25 13:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 02 @ 0-1.5' (H251678-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.92	96.1	2.00	17.8	
Toluene*	<0.050	0.050	03/25/2025	ND	2.10	105	2.00	19.6	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	2.33	117	2.00	17.0	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	7.00	117	6.00	17.5	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *86.2 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *81.7 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 11 @ 0-3' (H251678-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.92	96.1	2.00	17.8	
Toluene*	<0.050	0.050	03/25/2025	ND	2.10	105	2.00	19.6	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	2.33	117	2.00	17.0	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	7.00	117	6.00	17.5	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *87.0 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *82.9 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 14 @ 0-1.5' (H251678-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.92	96.1	2.00	17.8	
Toluene*	<0.050	0.050	03/25/2025	ND	2.10	105	2.00	19.6	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	2.33	117	2.00	17.0	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	7.00	117	6.00	17.5	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *89.1 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *84.7 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 15 @ 0-3' (H251678-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.73	86.5	2.00	10.7	
Toluene*	<0.050	0.050	03/25/2025	ND	1.89	94.5	2.00	5.90	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	1.94	97.1	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	6.06	101	6.00	2.28	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *85.9 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *81.8 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 24 @ 0-1' (H251678-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.73	86.5	2.00	10.7	
Toluene*	<0.050	0.050	03/25/2025	ND	1.89	94.5	2.00	5.90	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	1.94	97.1	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	6.06	101	6.00	2.28	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *77.9 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *74.5 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	03/21/2025	Sampling Date:	03/20/2025
Reported:	03/27/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	25E-00017	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: WS 25 - 25 @ 0-1' (H251678-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/25/2025	ND	1.73	86.5	2.00	10.7	
Toluene*	<0.050	0.050	03/25/2025	ND	1.89	94.5	2.00	5.90	
Ethylbenzene*	<0.050	0.050	03/25/2025	ND	1.94	97.1	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/25/2025	ND	6.06	101	6.00	2.28	
Total BTEX	<0.300	0.300	03/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/24/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2025	ND	212	106	200	3.79	
DRO >C10-C28*	<10.0	10.0	03/24/2025	ND	195	97.4	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	03/24/2025	ND					

Surrogate: 1-Chlorooctane *87.9 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *83.3 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-04	The RPD for the BS/BSD was outside of historical limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resources
Project Manager: Chad Hensley
Address: 3101 Boyd Dr
City: Carlsbad State: NM Zip: 88220
Phone #: 575-200-6167 Fax #:
Project #: 25E-00017 Project Owner:
Project Name: Brushy Draw 30-31 Federal Battery Spill
Project Location:
Sampler Name: Riley Arnold

BILL TO

P.O. #:
Company: ExxonMobil
Attn: Colton Brown
Address: 310 E Green St
City: Carlsbad
State: NM Zip: 88220
Phone #: 575-988-7890
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH: 8015D (GRO, DRO, MRO)	Chloride
H25178																	
1	WS25-02 @ 0-1.5'	C	1			X					X		3.20.25	12:30	X	X	X
2	WS25-11 @ 0-3'													12:45			
3	WS25-14 @ 0-1.5'													1:07			
4	WS25-15 @ 0-3'													1:22			
5	WS25-24 @ 0-1'													1:50			
6	WS25-25 @ 0-1'													2:16			

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Relinquished By: Riley Arnold Date: 3-21-25 Time: 1310 Received By: Tamara Maddox
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
rarnold@vertexresource.com Chensley@vertexresource.com
REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C 4.4
Corrected Temp. °C 4.7
Sample Condition: Cool ☑ Yes Intact ☑ Yes ☐ No ☐ No
CHECKED BY: (Initials) JS

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #140
Correction Factor 3.6°C +0.3°
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

JS 3/21/25

FORM-006 R 3.3 08/05/24

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 26, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/24/25 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
CHAD HENSLEY
3101 BOYD DRIVE
CARLSBAD NM, 88220
Fax To: NA

Received:	02/24/2025	Sampling Date:	02/21/2025
Reported:	02/26/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER`	Sampling Condition:	Cool & Intact
Project Number:	24E-04918, 25E-00017	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

Sample ID: BACKFILL (H251073-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/25/2025	ND	2.02	101	2.00	0.0537	
Toluene*	<0.050	0.050	02/25/2025	ND	2.04	102	2.00	5.63	
Ethylbenzene*	<0.050	0.050	02/25/2025	ND	2.10	105	2.00	9.82	
Total Xylenes*	<0.150	0.150	02/25/2025	ND	6.22	104	6.00	10.9	
Total BTEX	<0.300	0.300	02/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	02/25/2025	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2025	ND	189	94.7	200	3.11	
DRO >C10-C28*	<10.0	10.0	02/24/2025	ND	179	89.6	200	3.60	
EXT DRO >C28-C36	<10.0	10.0	02/24/2025	ND					

Surrogate: 1-Chlorooctane *60.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *59.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

48 hour Rush

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)	**BILL TO**
Project Manager: Chad Hensley	P.O. #:
Address: 3101 Boyd Drive	Company: XTO Energy, Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 575.725.5001 Fax #:	Address: 3104 E. Greene St
Project #: 24E-04918, 25E-00017 Project Owner: Colton Brown	City: Carlsbad
Project Name: Brushy Draw 30-31 Federal Battery	State: NM Zip: 88220
Project Location:	Phone #: 575-988-2390
Sampler Name: L. Pullman	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
H251073																	
1	BackFill	C	1			X							02.21.25	13:30	X	X	X

ANALYSIS REQUEST

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Lakin Pullman	Date: 2-24-25 Time: 07:00	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 2.24.25 Time: 1230	Received By: S Rodriguez	Please Email Results: Chad Hensley (CHensley@vertexresource.com), Lakin Pullman (Lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)
			REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2431846528, nAPP2500254282

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.4 Corrected Temp. °C 3.7	Sample Condition Cool Intact ☑ Yes ☐ Yes ☐ No ☐ No	CHECKED BY: (Initials) SR	Turnaround Time: Standard ☐ Bacteria (only) Sample Condition Rush: 48hr Cool Intact Observed Temp. °C Thermometer ID #113 #140 Correction Factor -0.5°C +0.3 ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

1/1

Daily Site Visit Report

Client	XTO Energy Inc. (US)	Inspection Date	1/23/2025
Site Location Name	Brushy Draw 30-31 Fed Battery	API #	
Client Contact Name		Project Owner	
Client Contact Phone #		Project Manager	
Project Reference #			
Unique Project ID			

Summary of Times

Arrived at Site	1/23/2025 8:20 AM
Departed Site	1/23/2025 3:30 PM

Field Notes

14:14 Continue hydro vac lines

14:15 Have hand digging crews dig down areas in between separator

Next Steps & Recommendations

1 Continue hand digging and hydro vac lines

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: North
	
Area in between separators on south end	Area in front of both seperators at 2’
Viewing Direction: East	**Viewing Direction**: West
	
Hydro vac area in front of separators	Hydro vac area in front of separator

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
Hydro vac area in front of separators	Hydro vac area with 6” line and electrical lines
Viewing Direction: West	**Viewing Direction**: West
	
Hydro vac area in front of separator	Hydro vac area by separators

Daily Site Visit Report

Viewing Direction: West

Hydro vac area by separators

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Plogger

Signature: 

Daily Site Visit Report

Client	XTO Energy Inc. (US)	Inspection Date	1/28/2025
Site Location Name	Brushy Draw 30-31 Fed Battery	API #	
Client Contact Name		Project Owner	
Client Contact Phone #		Project Manager	
Project Reference #			
Unique Project ID			

Summary of Times

Arrived at Site	1/28/2025 8:30 AM
Departed Site	1/28/2025 3:15 PM

Field Notes

14:26 Have hydro vac operators continue spotting lines

14:27 Hang digging crews digging in between separators

Next Steps & Recommendations

1 Continue spotting lines with hydro vac

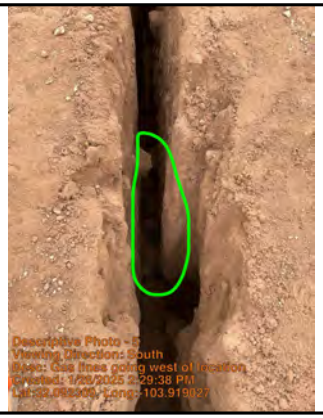
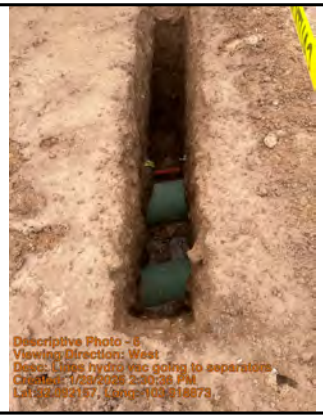
2 Continue digging out areas in between separators

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: West
	
Lines hydro vac going to separators	Lines hydro vac going to separators
Viewing Direction: West	**Viewing Direction**: West
	
Lines hydro vac going to separators	Lines hydro vac going to separators

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: West
	
4 Gas lines going west of location	Lines hydro vac going to separators
Viewing Direction: South	**Viewing Direction**: South
	
Area hand dug in between separators at 1’	Area hand dug in between separators at 1’

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
Area hand dug behind separators at 1’	Area hand dug in between separators at 1’

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Plogger

Signature: 
Signature

Daily Site Visit Report

Client	XTO Energy Inc. (US)	Inspection Date	1/29/2025
Site Location Name	Brushy Draw 30-31 Fed Battery	API #	
Client Contact Name		Project Owner	
Client Contact Phone #		Project Manager	
Project Reference #			
Unique Project ID			

Summary of Times

Arrived at Site	1/29/2025 8:29 AM
Departed Site	1/29/2025 2:30 PM

Field Notes

12:13 Finish lines to hydro vac

12:13 Continue hand digging in between separators

12:13 Begin 6’ excavation

Next Steps & Recommendations

1 Continue excavation around area of concern

Daily Site Visit Report

Site Photos

Viewing Direction: South

Have digging area down to 1’

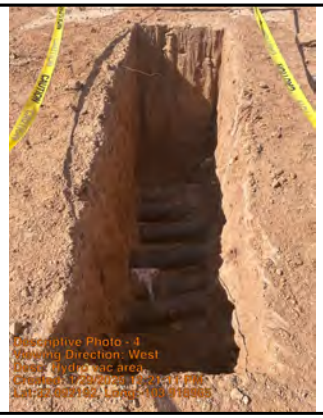
Viewing Direction: South

Have digging area down to 1’

Viewing Direction: South

Excavation area at 3’

Viewing Direction: West



Hydro vac area

Daily Site Visit Report

Viewing Direction: West

Hydro vac area

Viewing Direction: West

Hydro vac area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Plogger

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/4/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/5/2025 12:01 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/4/2025 10:03 AM
Departed Site	2/4/2025 3:33 PM

Field Notes

15:14 I met with my PM on site and completed a walkthrough of the the current and proposed excavation. We discussed the scope of work in regards to the two separate spills on site.

12:19 After inspecting the work area, I completed the JSA and reviewed safety. Work to continue with Halo excavating the initial proposed excavation.

15:15 I began collecting base samples from project # 25E-00017 (nAPP2500254282). I collected BS25-01 to -05 at ~1 ft bgs from the area hand dug between the two northern separators.

14:24 All collected samples tested for chloride using titration. All samples exceeded strictest criteria.

15:15 The hand dug area between the north separators will need to be hand dug down to ~2 ft bgs.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: South
	
Excavating progress - north pad	Excavating progress - north pad
Viewing Direction: South	**Viewing Direction**: South
	
Excavating progress - north pad	Excavating progress - north of separators

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
Area BS25-01 was collected	Area BS25-02 was collected

Viewing Direction: North	**Viewing Direction**: East
	
Area BS25-03 to -05 was collected	Excavation progress - hand digging between and north of separators

Daily Site Visit Report

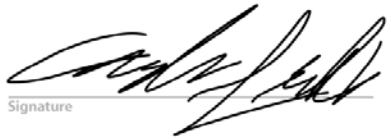
Viewing Direction: Southwest

Removed mater placed on liner

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/5/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/6/2025 12:35 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/5/2025 8:06 AM
Departed Site	2/5/2025 3:33 PM

Field Notes

8:12 On site at approximately 8:05 am. Driving delayed due to dense fog driving conditions. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

8:15 I assessed site, completed JSA and reviewed safety for today's activities. Focused on excavation, line strikes, line of fire, mobile equipment, and ignition sources. Work to continue on excavating the initial proposed excavation.

17:05 25E-00017, nAPP2500254282: I walked the site and marked out the remaining proposed excavation areas using white paint and flagging.

I also hand the Halo hand crew dig a couple test areas down to 1.5 and 2 ft and tested samples here. This determined theses areas would need to be dug down to 1.5' bgs.

17:02 24E-04918, nAPP2431846528: The eastern half of the 6 ft excavation needed to be extended out to meet the initial proposed excavation dimensions. I worked with Halo in dividing a plan of action to extend this area safety. The immediate excavation to the right and southeast of this area needed to be advanced down to 4' bgs as well.

17:01 I remarked proposed excavation perimeter on the north half of the excavation (24E-04918, nAPP2431846528).

Daily Site Visit Report

17:01 I collected BS24-01 and -02 (24E-04918, nAPP2431846528) at 4’ bgs.

Both samples field screened for chlorides and TPH. Both samples passed criteria.

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: North
	
Placard	Proposed excavation outlined with paint. Area is to the northwest of the southern large separator.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
Excavation progress. Area being dug down to 1.5’ bgs.	Proposed excavation outlined with paint. Area is to the southwest of the western most north large separator.

Viewing Direction: North	**Viewing Direction**: Northwest
	
Northern excavation progress. Area being dug down to 4’ bgs.	Northern excavation progress.

Daily Site Visit Report

Viewing Direction: East

Had hand dig crew dig down to 1.5 and 2 feet in an area between the two north large separators to gauge how deep they need to advance the area down.

Viewing Direction: North

Test area at 1’ and 1.5’ bgs southwest corner of western large separator.

Viewing Direction: North

Area where BS25-01 and -02 were collected at 4’ bgs.

Viewing Direction: North

Area being dug down to 4’ bgs. Western half will need to be dug down to 6’ bgs.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Excavation progress. Area being hand dug down to 1’ bgs. Hitting hard caliche/rock.	Proposed excavation area east of the north large separators.
Viewing Direction: South	**Viewing Direction**: Northeast
	
Proposed excavation perimeter outlined with paint.	Proposed excavation outlined with paint. Area is behind and to the east of the southern large separator.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/6/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/7/2025 12:18 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/6/2025 8:01 AM
Departed Site	2/6/2025 3:20 PM

Field Notes

12:55 On site at approximately 8:00 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

12:57 I assessed site, completed JSA and reviewed safety for today's activities. Focused on excavation, line strikes, line of fire, mobile equipment, and ignition sources. Work to continue on excavating the initial proposed excavation.

16:56 25E-00017, nAPP2500254282: I collected BS25-06 and -07 at 1' bgs in the area between the two northern large separators.

Both samples field screened for chlorides. -06 exceeded criteria but -07 passed field screening criteria.

-07 was field screened for TPH and passed field screening criteria.

16:52 I also had the Halo hand crew dig a couple test areas down to 1.5 and 2 ft and tested sample near the eastern north large separator and near BH25-12. This determined theses areas would need to be dug down to 1.5-2' bgs.

16:54 24E-04918, nAPP2431846528: I collected BS24-03 to -06 at 4' bgs and BS25-16 at 3' bgs.

All samples field screened for chlorides and TPH. All samples passed criteria.

16:53 Using GPS, I marked out the northwest perimeter of the proposed north excavation.

Daily Site Visit Report

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: Northwest
	
Placard	Excavation progress
Viewing Direction: West	**Viewing Direction**: North
	
Excavation progress	Test hole down to 2’ bgs

Daily Site Visit Report

Viewing Direction: North

24E-04918, nAPP2431846528: Area where BS25-03 and -04 were collected at 4’ bgs.

Viewing Direction: North

24E-04918, nAPP2431846528: Area where BS25-05 and -06 were collected at 4’ bgs.

Viewing Direction: North

25E-00017, nAPP2500254282: Area where BS24-06 was collected at 1’ bgs. Area is in process of digging down to 1.5 ft bgs using hand tools.

Viewing Direction: North

25E-00017, nAPP2500254282: Area where BS24-07 was collected at 1’ bgs.

Daily Site Visit Report

Viewing Direction: North

Area being hand dug down to 1.5 ft bgs.

Viewing Direction: North

24E-04918, nAPP2431846528: Area where BS24-16 was collected at 3’ bgs.

Viewing Direction: South

Excavation progress

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/7/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/8/2025 12:58 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/7/2025 7:57 AM
Departed Site	2/7/2025 3:59 PM

Field Notes

8:03 On site at approximately 8:00 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

8:04 I assessed site, completed JSA and reviewed safety for today's activities. Focused on excavation, line strikes, line of fire, mobile equipment, and ignition sources. Work to continue on excavating the initial proposed excavation.

17:53 24E-04918, nAPP2431846528: In preparation for the hydrovac crew, I marked out the remaining proposed 6' excavation using paint and flagging.

17:51 25E-00017, nAPP2500254282: Using GPS, I recorded several of the south release proposed excavation polygons onto ArcGIS map.

17:53 24E-04918, nAPP2431846528:
I collected WS25-01 to -04 at 0-4' bgs and -05 to -06 at 0-3' bgs from the north release/excavations and field screened them for chloride.

All passed field screening criteria for chloride except WS25-02 and -05.

WS25-01, -03, -04, and -06 field screened for TPH. All passed field screening criteria for TPH except -06.

Daily Site Visit Report

17:54 24E-04918, nAPP2431846528: Hydrovac crew arrived at approximately 9:40 and the Halo operation constructed an access ramp down into the 4’ excavation for the hydrovac truck

17:54 24E-04918, nAPP2431846528:
I collected BS25-17 to -22 at 1’ bgs from the northwest portion of the excavation.

All samples field screened for chloride. All samples passed field screening criteria except -17 and -18.

BS25-19 to -22 were field screened for TPH. All samples passed field screening criteria except -19.

17:52 I recorded the current perimeters of the multiple excavations ArcGIS-Collector map using

17:52 The site experienced high wind gust at ~1:00 pm. I observed that the Halo hand crew ceased hand digging at ~2:00 pm and began to reassemble the fencing around the different excavations.

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: South
	
Placard	Area where WS25-02 was collected

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: South
	
Area where WS25-03 was collected	Area where WS25-04 was collected. Note wall sample collected before Halo made ramp for Hydrovac truck The heavy machinery continued to work until ~3:00 pm

Viewing Direction: Northwest	**Viewing Direction**: West
	
Excavation progress	Excavation progress

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: Southwest
	
Area where WS25-05 was collected	Area where WS25-06 was collected
Viewing Direction: North	**Viewing Direction**: West
	
Area where BS25-17 was collected	Area where BS25-18 and -19 were collected

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Area where BS25-20 and -21 were collected	Halo sent out Hydrovacing crew to hydrovac around underground lines in proposed 6’ excavation.

Viewing Direction: West	**Viewing Direction**: North
	
Area where BS25-22 was collected	Excavation progress: area between the two north large separators being dug down to 1.5 ft.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
Excavation progress: area between the two north large separators being dug down to 1.5 ft.	Excavation progress: area between the two north large separators being dug down to 1.5 ft.
Viewing Direction: South	**Viewing Direction**: South
	
Excavation progress: hydrovac is continuing to dig down to 6 ft bgs.	Excavation progress

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: South
	
Hydrovacing down to 6 ft	Area where WS25-01 was collected

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/10/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/11/2025 1:24 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/10/2025 8:07 AM
Departed Site	2/10/2025 4:02 PM

Field Notes

8:39 Completed Vertex and XTO JSA on arrival. Reviewed JSA with Halo work crew and confirmed they already received approval to proceed from XTO. Communicated to XTO that I was also on location. On site to oversee continued excavation and hydrovac along buried pipelines and between treating equipment.

8:38 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

15:52 Halo personnel continued digging north of pipe rack between treating equipment to 1.5 feet bgs with hand tools.

15:53 Preliminary soil samples to be collected and field screened from additional excavation the following day.

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: West
	
North of pipe rack facing east. Excavation to 1.5 feet bgs.	North of pipe rack facing west. Excavation to 1.5 feet bgs.
Viewing Direction: North	**Viewing Direction**: South
	
North edge of pipe rack facing north. Excavation to 1.5 feet bgs.	North of pipe rack and treating equipment facing south. Excavation to 1.5 feet bgs in progress.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: West
	
North of pipe rack between treating equipment facing north. Excavation to 1.5 feet bgs in progress.	At pad entrance facing west.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/11/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/12/2025 1:17 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/11/2025 7:08 AM
Departed Site	2/11/2025 4:28 PM

Field Notes

15:41 Incident around pipe rack and treating equipment. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. Communicated to XTO and confirmed work clearance. On site to continue excavation with hand tools between and around treating equipment.

15:42 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference

15:42 Work crew continued excavation to 1.5 feet bgs between and around treating equipment.

15:44 Collected preliminary base samples BS25-01 through BS25-06 at 1.5 feet bgs. Field screening results were below strictest threshold for chloride.

15:53 Per XTO: Excavation was required to terminate once within 1 feet of equipment to maintain stability.

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: West

At pad entrance facing west.

Viewing Direction: South

North of pipe rack facing south over excavation to 1.5 feet bgs.

Viewing Direction: Northeast

North of pipe rack facing northeast over excavation to 1.5 feet bgs.

Viewing Direction: Northwest

North of pipe rack facing northwest over excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: West
	
North of pipe rack facing east over excavation to 1.5 feet bgs.	North of pipe rack facing west over excavation to 1.5 feet bgs.
Viewing Direction: West	**Viewing Direction**: West
	
North of pipe rack facing west over excavation to 1.5 feet bgs.	North of pipe rack facing south over excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: East

North of pipe rack facing east over excavation to 1.5 feet bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/12/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/13/2025 2:10 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/12/2025 7:01 AM
Departed Site	2/12/2025 4:34 PM

Field Notes

15:04 Incident around of treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to continue hand excavation north of pipe rack.

15:05 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

15:08 Halo work crew continued hand excavation immediately north of pipe rack eastward and westward between treating equipment to 1.5 feet bgs. The excavation was not completed when work was terminated due to high winds and dust.

15:49 Collected preliminary base samples BS25-09 and BS25-11 from excavation to 1.5 feet bgs.

15:49 Field screening results for preliminary excavation base samples to 1.5 feet bgs were below NMOCD threshold for chloride.

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: West

At pad entrance facing west.

Viewing Direction: East

North of pipe rack facing east. Excavation to 1.5 feet bgs.

Viewing Direction: Northeast

North of pipe rack facing northeast. Excavation to 1.5 feet bgs.

Viewing Direction: South

North of pipe rack facing south. Excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: West

North of pipe rack facing west. Excavation to 1.5 feet bgs.

Viewing Direction: Northwest

North of pipe rack facing northwest. Excavation to 1.5 feet bgs.

Viewing Direction: Southeast

North of pipe rack facing southeast. Excavation to 1.5 feet bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/13/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/14/2025 1:03 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/13/2025 7:20 AM
Departed Site	2/13/2025 4:28 PM

Field Notes

15:54 Incident around treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to continue hand excavation north of pipe rack and start mechanical excavation south of pipe rack.

9:46 Swept excavation areas with magnetic locator prior to ground disturbance. Infrastructure proximity introduced interference.

15:57 Halo work crew continued digging east/west along north side of pipe rack to 1.5 feet bgs east. Crew did not complete excavation and will continue the following day.

16:00 Westernmost excavation south of pipe rack was started and completed with equipment. Excavation depths were 1.5 and 3 feet bgs due to higher chloride concentrations in the center.

16:02 Collected preliminary wall sample WS25-01 from available surfaces of west hand excavation. Field screening results were below strictest threshold for chloride.

16:08 Collected preliminary wall samples WS25-08 through WS25-13 from excavations to 1.5 and 3 feet south of pipe rack. Field screening results were below strictest threshold for chloride with the exception of WS25-11 which is against pipe rack and cannot be excavated further.

16:09 Collected preliminary base samples BS25-15 through BS25-19 from excavations to 1.5 and 3 feet south of pipe rack. Field screening results were below strictest threshold for chloride.

Daily Site Visit Report

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: North
	
At pad entrance facing west.	North edge of pipe rack facing north. Continued excavation to 1.5 feet bgs east of initial excavation.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: South
	
North edge of pipe rack facing north. Continued excavation to 1.5 feet bgs west of initial excavation.	North of pipe rack facing south. Continued excavation to 1.5 feet bgs west of initial excavation.

Viewing Direction: Southeast	**Viewing Direction**: Southwest
	
South edge of pipe rack facing southeast. Excavation to 1.5 and 3 feet bgs.	South edge of pipe rack facing southwest. Excavation to 1.5 and 3 feet bgs.

Daily Site Visit Report

Viewing Direction: South

South edge of pipe rack facing south.
Excavation to 1.5 and 3 feet bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/14/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/15/2025 1:35 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/14/2025 7:09 AM
Departed Site	2/14/2025 4:52 PM

Field Notes

8:29 Incident around of treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to continue hand excavation north of pipe rack. Confirmed with XTO that I was on location and work was approved.

8:25 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

8:29 Communicated with Kent Retz with XTO and confirmed that laboratory turnaround time for all confirmation samples will be 48-hour to expedite excavation completion and backfill.

15:21 Halo work crew focused on completing excavation north of pipe rack to 1.5 feet bgs inside. Excavation west and east along north side of pipe rack were completed. Excavations were offset from load supporting objects by 1.5 feet to maintain stability.

15:24 Collected preliminary excavation base and wall samples BS25-09, BS25-10, BS25-11, WS25-01 and WS25-03 from new, complete, excavation surfaces. Field screening results were below NMOCD strictest criteria for chloride and TPH.

15:29 Excavation north of pipe rack tentatively completed pending confirmation sampling and corresponding lab results.

Next Steps & Recommendations

1. Collect confirmation samples from excavation north of pipe rack.
2. Continue excavation south of pipe rack.

Daily Site Visit Report

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: East
	
At pad entrance facing west.	North of pipe rack, north of compressor shed facing east. West side of excavation to 1.5 feet bgs completed north of pipe rack.

Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: South
	
North of pipe rack, north of compressor shed facing southeast. West side of excavation to 1.5 feet bgs completed north of pipe rack.	North of pipe rack, northeast of compressor shed facing south. West side of excavation to 1.5 feet bgs completed north of pipe rack.
Viewing Direction: North	**Viewing Direction**: North
	
North edge of pipe rack facing north. West side of excavation to 1.5 feet bgs completed north of pipe rack.	North edge of pipe rack facing north. West side of excavation to 1.5 feet bgs completed north of pipe rack.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
North edge of pipe rack facing north. East side of excavation to 1.5 feet bgs completed north of pipe rack.	North edge of pipe rack facing north. East side of excavation to 1.5 feet bgs completed north of pipe rack.
Viewing Direction: Northeast	**Viewing Direction**: South
	
North edge of pipe rack facing northeast. East side of excavation to 1.5 feet bgs completed north of pipe rack.	North of pipe rack facing south. East side of excavation to 1.5 feet bgs completed north of pipe rack.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/15/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/16/2025 1:46 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/15/2025 7:21 AM
Departed Site	2/15/2025 4:42 PM

Field Notes

13:51 Incident around of treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. On site to collect confirmation samples of hand excavations north of pipe rack to 1 and 1.5 feet bgs. Communicated with XTO and received permission to work.

13:51 Swept excavation surfaces to be sampled with magnetic locator. Infrastructure proximity introduced interference.

14:34 Collected confirmation samples from surfaces of excavations to 1 and 1.5 feet bgs. Excavation was completed with hand tools as close to surrounding treating equipment and infrastructure as safely possible. The north edge of the excavation abuts an excavation in progress to address a separate incident. The south edge of the excavation is against a pipe rack.

14:35 Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.

16:02 Collected confirmation samples WS25-01 and WS25-03 through WS25-06 from walls of excavation to 1.5 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

15:59 Collected confirmation samples BS25-01 through BS25-11 from base of excavation to 1.5 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

16:01 Collected confirmation sample WS25-02 from south wall of excavation against north edge of pipe rack and equipment. Field screening results exceeded NMOCD strictest threshold for chloride. Excavations cannot continue south with equipment in place. Equipment is actively used for production.

Daily Site Visit Report

16:03 Collected confirmation samples BS25-12 through BS25-14 and WS25-07 from base and wall of excavation to 1 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

Next Steps & Recommendations

1. Submit confirmation samples to laboratory for analyses.
2. Continue excavation south of pipe rack.

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: Southeast
	
At pad entrance facing west.	North of compressor shack facing southeast. Collected confirmation samples BS25-10 and WS25-01 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Southwest
	
Northeast of compressor shack facing south. Collected confirmation samples BS25-09, BS25-10, and WS25-01 from excavation to 1.5 feet bgs.	Northeast of compressor shack facing southwest. Collected confirmation samples BS25-09, BS25-10, and WS25-01 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Northeast
	
South of compressor shack facing east. Collected confirmation samples BS25-01, BS25-09, WS25-01, and WS25-02 from excavation to 1.5 feet bgs.	South of compressor shack facing northeast. Collected confirmation samples BS25-01, BS25-09, BS25-10, and WS25-01 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: West
	
North edge of pipe rack facing northwest. Collected confirmation samples BS25-01, BS25-09, WS25-01, and WS25-02 from excavation to 1.5 feet bgs.	North of pipe rack facing west. Collected confirmation samples BS25-01, BS25-09, WS25-01, and WS25-02 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Northwest
	
North of pipe rack facing east. Collected confirmation samples BS25-02, WS25-02, and WS25-03 from excavation to 1.5 feet bgs.	North edge of pipe rack facing northwest. Collected confirmation samples BS25-02, BS23-03, WS25-02, and WS25-03 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: North
	
North of pipe rack facing west. Collected confirmation samples BS25-02, BS23-03, WS25 -02, and WS25-03 from excavation to 1.5 feet bgs.	North edge of pipe rack facing north. Collected confirmation samples BS25-11 and WS25-03 from excavation to 1.5 feet bgs.
Viewing Direction: Northwest	**Viewing Direction**: South
	
North edge of pipe rack facing northwest. Collected confirmation samples BS25-11 and WS25-03 from excavation to 1.5 feet bgs.	North of pipe rack facing south. Collected confirmation samples BS25-11 and WS25-03 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: North
	
North of pipe rack facing south. Collected confirmation sample WS25-02 from south edge excavation to 1.5 feet bgs against pipe rack and equipment.	North edge of pipe rack facing north. Collected BS23-03 through BS25-08 and WS25-03 through WS25-05 from excavation to 1.5 feet bgs.
Viewing Direction: North	**Viewing Direction**: Northeast
	
North of pipe rack facing north. Collected BS23 -05 through BS25-08, WS25-04, and WS25-05 from excavation to 1.5 feet bgs.	Between treaters facing northeast. Collected BS23-07, BS25-08, WS25-04, WS25-05, and WS25-06 from excavation to 1.5 feet bgs.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: South
	
Between treaters facing northwest. Collected BS23-07, BS25-08, WS25-04, WS25-05, and WS25-06 from excavation to 1.5 feet bgs.	North of treating equipment facing south. Collected BS23-03 through BS25-08, and WS25-04 through WS25-06 from excavation to 1.5 feet bgs.

Viewing Direction: South	**Viewing Direction**: Southwest
	
North of treating equipment facing south. Collected BS23-12 through BS25-14 and WS25-07 from excavation to 1 feet bgs.	North of treating equipment facing southwest. Collected BS23-12 through BS25-14 and WS25-07 from excavation to 1 feet bgs.

Daily Site Visit Report

Viewing Direction: Northwest

North of treating equipment facing southeast. Collected BS23-12 through BS25-14 and WS25-07 from excavation to 1 feet bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 
Signature

Daily Soil Sampling

Client: Client: XTO Energy Inc. (US)

Location: Site: Brushy Draw 30-31 Fed Battery

Date: (SD: 2/15/25)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC ()	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BS25-01	1.5		4	0.09	20.3	62	175	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-02	1.5		11	0.21	20.3	235	200	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-03	1.5		9	0.30	20.4	360	175	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-04	1.5		10	0.19	20.6	193	200	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-05	1.5		6	0.14	21	103		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-06	1.5		7	0.13	20.9	93	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-07	1.5		13	0.10	20	89	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-08	1.5		10	0.26	20.3	307	350	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-09	1.5		6	0.24	20.4	274	150	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

BS25-10	1.5		22	0.13	20.3	119	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-11	1.5		9	0.28	19.9	353	225	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-12	1		9	0.09	21.8	0	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-13	1		10	0.08	22.6	0	75	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-14	1		5	0.20	22.5	125	175	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-01	0-1.5		9	0.12	19.6	135		BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-02	0-1.5		16	6.07	20.1	8701	9450	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-03	0-1.5		50	0.40	20.3	509	350	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-04	0-1.5		16	0.46	19.7	622	500	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-05	0-1.5		19	0.43	20	565	450	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-06	1-0.5		15	0.16	20.8	141	200	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-07	0-1		20	0.53	20.8	675	250	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/20/2025 12:24 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	
Departed Site	2/19/2025 4:54 PM

Field Notes

11:22 Incident around of treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to start hand excavation of pipe rack. Also on site to collect confirmation samples south of pipe rack.

11:23 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

19:31 Collected confirmation samples from surfaces of excavations to 1.5 and 3 feet bgs immediately south of pipe rack . Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.

19:31 Collected confirmation samples BS25-15, BS25-18, and BS25-19 from base of excavations to 1.5 feet bgs. Collected confirmation samples BS25-16 and BS25-17 from base of excavation to 3 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

12:25 Collected confirmation samples WS25-08 and WS25-09 from walls of excavations to 1.5 feet bgs. Collected confirmation samples WS25 -10, WS25-12, and WS25-13 from walls of excavation to 3 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

19:36 Collected confirmation samples WS25-11 and WS25-14 from north walls of excavations to 3 and 1.5 feet bgs, respectively. The north excavation walls were as close as safety possible to the pipe rack and active production infrastructure. Field screening results exceeded NMOCD strictest threshold for chloride.

Daily Site Visit Report

19:36 Work crew started excavation with hand tools north of large tower. An excavation to 3 feet bgs was completed west of the stairs and north of the tower. The excavation could not be expanded or connected to the larger excavation because surrounding equipment supports would be compromised.

19:35 Collected confirmation sample BS25-20 from base of isolated excavation to 3 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.

19:37 Collected confirmation sample WS25-20 from walls of isolated excavation to 3 feet bgs. The excavation walls were as close as safety possible to the surrounding active production infrastructure. Field screening results exceeded NMOCD strictest threshold for chloride.

19:39 Kent Retz confirmed that a small mini-excavator can be used for remediation of accessible areas of the release. The excavator is not to work within 2 feet of the surrounding equipment.

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: Southeast
	
At pad entrance facing west.	South edge of pipe rack facing southeast. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Southwest
	
South edge of pipe rack facing south. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.	South edge of pipe rack facing southwest. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.
Viewing Direction: West	**Viewing Direction**: North
	
South of pipe rack facing west. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.	South of pipe rack facing north. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
South of pipe rack facing east. Collected confirmation samples from excavations to 1.5 and 3 feet bgs.	South of pipe rack facing north. Collected confirmation samples from hand excavation to 3 feet bgs.
Viewing Direction: South	**Viewing Direction**: Southwest
	
South edge of pipe rack facing south. Collected confirmation samples from hand excavation to 3 feet bgs.	South edge of pipe rack facing southwest. Collected confirmation samples from hand excavation to 3 feet bgs.

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: Southwest
	
South of pipe rack facing northeast. Collected confirmation samples from hand excavation to 3 feet bgs.	South of pipe rack facing southwest. Work crew started excavation south of pipe rack.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Daily Soil Sampling

Client: Client: XTO Energy Inc. (US)

Location: Site: Brushy Draw 30-31 Fed Battery

Date: (SD: 2/20/25)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC ()	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BS25-15	1.5		15	0.20	21.4	173	150	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-16	3		4	0.14	20.6	121	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-17	3		18	0.17	20.5	168	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-18	1.5		4	0.13	20.1	128	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-19	1.5		3	0.10	20.3	76	75	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
BS25-20	3		34	0.36	20.1	460	350	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-08	0-1.5		1	0.17	20	190	125	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-09	0-1.5		2	0.20	21	190	125	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-10	0-3		8	0.34	20.5	414	250	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Soil Sampling

WS25-11	0-3		12	2.12	20.1	3000	3100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-12	1.5-3		21	0.13	19.9	137	100	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-13	1.5-3		18	0.13	20.7	102	125	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-14	0-1.5		23	1.31	20.4	1818	1900	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	
WS25-15	0-3		33	1.34	20.6	1853	1750	BTEX (EPA SW-846 Method 8021B/8260B), Chloride (EPA 300.0), TPH (EPA SW-846 Method 8015M)		√	

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/20/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/21/2025 2:39 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/20/2025 7:10 AM
Departed Site	2/20/2025 4:47 PM

Field Notes

13:45 Incident around treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to continue excavation south of pipe rack.

15:27 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

15:36 Halo hand crew continued excavation in area inaccessible by equipment east and northeast of tall tower. Excavation started at 1 feet bgs and continued to 3 feet bgs to meet closure threshold for chloride. Work is in progress.

16:42 Halo equipment crew started excavation south of pipe rack between large separator and tall tower. Excavation started at 1 feet bgs and was increased to 2 feet bgs. Excavation in progress.

16:44 Preliminary sample BS25-21 collected from hand excavation east of tall tower. Field screening results were below NMOCD threshold for chloride at 3 feet bgs.

18:38 Preliminary samples BS25-30, BS25-31, and BS25-32 collected from mechanical excavation between separator and tall tower. Field screening results were below NMOCD threshold for chloride at 2 feet bgs.

Next Steps & Recommendations

1 Continue excavation.

Daily Site Visit Report

Daily Site Visit Report

Site Photos

Viewing Direction: West

At pad entrance facing west.

Viewing Direction: West

South of pipe rack facing west. Excavation to 3 feet bgs.

Viewing Direction: Southwest

South of pipe rack facing southwest. Excavation to 3 feet bgs.

Viewing Direction: East

South of pipe rack facing east. Excavation to 3 feet bgs.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: Southeast
	
South of pipe rack facing northwest. Excavation to 2 feet bgs.	South of pipe rack facing southeast. Excavation to 2 feet bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/21/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/22/2025 5:04 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/21/2025 7:02 AM
Departed Site	2/21/2025 4:44 PM

Field Notes

19:16 Incident around treating equipment and pipe rack. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. On site to continue hand and mechanical excavations south of pipe rack.

19:16 Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.

6:07 Halo work crew continued using hand tools to expand excavation on east side of release area. Field screening result for preliminary sample BS25-22 at 1 feet bgs was below closure threshold for chloride. Excavation to continue with depth increased in 1 feet increments as needed.

6:11 Halo work crew mechanically excavated to 1 and 2 feet bgs between large treater/separator. Base along north edge of excavation to 2 feet bgs below chloride threshold at BS25-30 and BS25-32. Field screening results at 2 feet bgs for BS25-29 and BS25-30 immediately to south exceeded chloride threshold and the respective area will be excavated to 3 feet bgs.

6:14 Field screening results for BS25-27 inside mechanical excavation 1 feet bgs in “corner” immediately west of tall tower were below threshold for chloride and should not require additional excavation.

6:15 Field screening results for BS25-26 inside mechanical excavation to 1 feet bgs immediately southwest of tall tower exceeded threshold for chloride and will have excavation depth increased to 2 feet bgs.

6:17 Halo stockpiled backfill on site as material was hauled out. Collected composite samples of backfill. Field screening results were below NMOCD strictest criteria for chloride and TPH.

Daily Site Visit Report

Next Steps & Recommendations

1. Continue excavation south of pipe rack.
2. Submit backfill sample to laboratory for analyses.

Daily Site Visit Report

Site Photos

Viewing Direction: West

At site entrance facing west.

Viewing Direction: South

South edge of pipe rack facing south. Excavation to 1 feet bgs in progress.

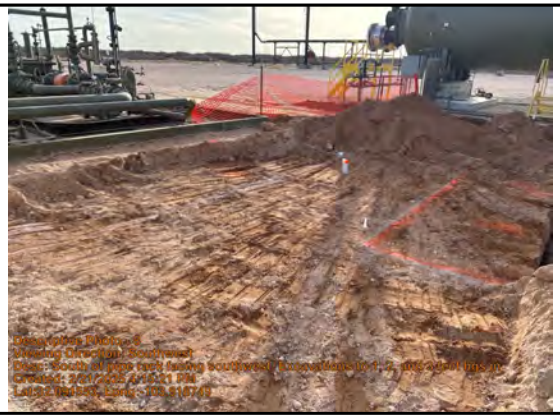
Viewing Direction: West

South of pipe rack facing west. Excavation to 1 feet bgs in progress.

Viewing Direction: North

South of pipe rack facing north. Excavation to 1 feet bgs in progress.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: West
	
South of pipe rack facing northwest. Excavation to 3 feet bgs.	South of pipe rack facing west. Excavation to 3 feet bgs.
Viewing Direction: Northwest	**Viewing Direction**: Southwest
	
South of pipe rack facing northwest. Excavations to 1, 2, and 3 feet bgs in progress.	South of pipe rack facing southwest. Excavations to 1, 2, and 3 feet bgs in progress.

Daily Site Visit Report

Viewing Direction: South

South of pipe rack facing south. Excavations to 1, 2, and 3 feet bgs in progress.

Viewing Direction: South

South of pipe rack facing south. Excavations to 1, 2, and 3 feet bgs in progress.

Viewing Direction: East

North of tank battery facing southwest. Backfill stockpile.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/24/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/25/2025 12:27 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/24/2025 8:02 AM
Departed Site	2/24/2025 4:01 PM

Field Notes

13:32 On site at approximately 8:00 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

13:34 I assessed site, completed JSA and reviewed safety for today's activities. Focused on excavation, line strikes, line of fire, mobile equipment, and ignition sources. Work to continue on excavating the initial proposed excavation south of the pipe rack.

13:38 25E-00017, nAPP2500254282:

I collected BS25-23 at 1' bgs; -26 at 2' bgs; -29 and -31 at 3' bgs; -28, -33, and -34 at 1.5' bgs.

15:35 All samples were field screened for chloride using silver nitration.

Samples BS25-26, -29, -31, -33, and -34 passed field screening criteria, all other samples exceeded closure criteria.

17:20 Samples BS25-26, -29, -31, -33, and -34 were field screened for TPH using petroflag.

All samples passed field screening criteria.

17:21 I field screened a couple of test holes for Halo to give them a better idea of the depths they should initially target to the east and southeast of sample point BS25-21. The area east of BS25-21 will need to be further dug to 2.5-3 ft bgs. The area southeast of -21 will be targeted at 1 ft bgs.

Daily Site Visit Report

17:23 Halo was able to finish the remaining initial proposed excavation that was accessible with the mini-excavator. There is still a significant area to be excavated, through the use of hand tools, on the eastern most proposed excavation.

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: Northwest
	
Placard	Southeast corner of excavation facing northwest. This area is being excavated using hand tools.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: North
	
Southeast corner of excavation facing northwest. This area is being excavated using hand tools.	Excavation progress: Area where BS25-23 was collected at 1’ bgs. The central trench was a test hole dug to ~2.5 ft and the hand crew has begun to expand out the test hole.

Viewing Direction: North	**Viewing Direction**: Northwest
	
Test hole dug to 1 ft bgs.	Excavation progress east of the south separator.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: West
	
Area where BS25-26 was collected at 2 ft bgs	Area where BS25-28 was collected at ~1.5 ft bgs

Viewing Direction: West	**Viewing Direction**: Southwest
	
Area where BS25-29 and -31 were collected at 3 ft bgs	Area where BS25-33 and -34 were collected at ~1.5 ft bgs

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: Northeast
	
Excavation progress. Area southeast of large separator was dug down to ~1.5 ft bgs using mini-excavator.	Excavation progress. Area south of large excavator dug down to ~1.5 ft bgs using mini-excavator

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/25/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/26/2025 12:11 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/25/2025 7:39 AM
Departed Site	2/25/2025 3:28 PM

Field Notes

8:01 On site at approximately 7:40 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

8:06 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. Focused on excavation, line strikes, line of fire, mobile equipment, and ignition sources. Work to continue on sampling the excavation recently dug south, southwest, and east of the separator (south of pipe rack).

The hand digging crew from Halo will not be on site today and hand digging on the east, southeast excavation will be put on hold.

16:54 It appears that the mini-excavator was having mechanical issues. A technician/mechanic arrived on site at approximately 12:20 pm and spent the rest of the afternoon working on it.

17:01 I collected BS25-35 to -40 at 1.5' bgs; WS25-19 at 0-2' bgs; -22 at 0-3' bgs; -23 to -25 at 0-1.5 bgs; -26 at 1.5-2' bgs; -27 and -29 at 1.5-3' bgs.

17:04 All samples were field screened for chloride using silver nitration.

All samples passed field screening criteria except BS25-28.

Daily Site Visit Report

17:05 All samples except WS25-28 were field screened for TPH using petroflag.

All samples passed field screening criteria.

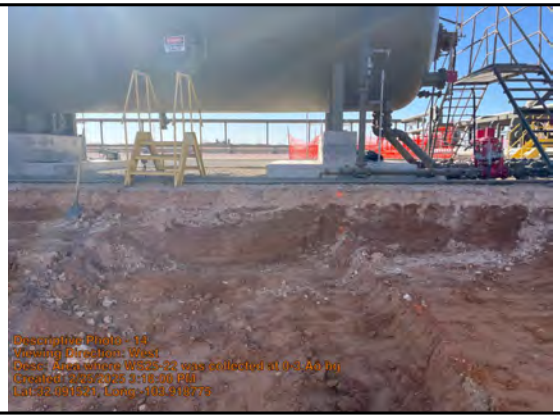
Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: South
	
Placard	Area where WS25-25 was collected at 0-1.5’ bgs.
Viewing Direction: Southwest	**Viewing Direction**: West
	
Area where WS25-24 was collected at 0-1.5’ bgs.	Area where WS25-23 was collected at 0-1.5’ bgs.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: West
	
Area where WS25-23 was collected at 0-1.5’ bgs.	Area where WS25-22 was collected at 0-3’ bgs.
Viewing Direction: East	**Viewing Direction**: Northeast
	
Area where WS25-19 was collected at 0-2’ bgs.	Area where WS25-26 was collected at 1.5-2’ bgs.

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: South
	
Area where WS25-27 was collected at 1.5-3’ bgs.	Area where WS25-28 was collected at 1.5-3’ bgs.
Viewing Direction: Southeast	**Viewing Direction**: Northeast
	
Mechanical issues with excavator	Southwest corner of excavation facing northeast

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: East
	
South end of excavation facing north	West side of excavation facing east
Viewing Direction: Northwest	**Viewing Direction**: Southwest
	
Southeast corner of excavation facing northwest	Area where BS25-35 to -38 were collected at 1.5’ bgs.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: West
	
Area where BS25-35 to -38 were collected at 1.5’ bgs.	Area where BS25-39 and -40 were collected at 1.5’ bgs.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/27/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/27/2025 11:59 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/27/2025 7:46 AM
Departed Site	2/27/2025 3:23 PM

Field Notes

13:42 On site at approximately 7:45 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

13:45 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. Focused on hand excavation near pad infrastructure and equipment and line strikes. Work to continue on hand digging the excavation south, southeast and east of the heater treater (south of pipe rack).

Halo sent out 3 employees for hand digging the excavation. There is no heavy equipment operator today.

16:43 I collected BH25-01 at 1', 2', and 3' bgs (north of WS25-17 & WS25-15, north of pipe rack) and BH25-02 at 1' and 2' bgs (north of WS25-21, north of pipe rack)

These samples were field screened for chloride using silver nitration. All samples passed field screening criteria.

16:45 BH25-01 at 3' and BH25-02 at 2' bgs were field screened for TPH using petroflag. Both samples passed field screening criteria

16:48 I collected BS25-23 at 3' bgs. The sample was field screened for chlorides and TPH and passed field screening criteria.

Daily Site Visit Report

16:51 Halo dug 3 test holes at ~1 ft bgs through the southeast portion of the proposed excavation area. I sample these areas and field screened them for chlorides for which the passed. We will target excavation at 1 ft bgs throughout this area.

16:52 BH25-01 at 3’ bgs and BH25-02 at 2’ bgs were jarred and will be sent to lab for analysis.

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: East
	
Placard	Excavation progress

Viewing Direction: South	**Viewing Direction**: South
	
BH25-01	BH25-02

Daily Site Visit Report

Viewing Direction: Northeast

Southwest corner facing northeast

Viewing Direction: North

South end of excavation facing north

Viewing Direction: Northwest

South end of excavation facing northwest

Viewing Direction: North

Test holes dug

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: Southeast
	
Excavation progress: area where BS25-23 was collected.	Excavation progress

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/28/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/28/2025 11:57 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/28/2025 7:41 AM
Departed Site	2/28/2025 3:25 PM

Field Notes

16:41 On site at approximately 7:40 am. I contacted Kent Retz informing him of my arrival.

8:07 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. Focused on hand excavation near pad infrastructure and equipment and line strikes. Work to continue on hand digging the excavation south, southeast and east of the heater treater (south of pipe rack).

Halo sent out 2 employees for hand digging the excavation. There is no heavy equipment operator today.

9:22 An additional Halo employee arrived on site and started working at ~9:20 am

16:42 Halo continued to expand the eastern 3 ft excavation by hand digging. I field screened a couple more test pits to help determine how much further this excavation would need to expand.

16:43 I collected WS25-29 at 0-3' bgs and field screened it for chloride and TPH. It passed field screening criteria.

16:46 After obtaining a clean wall sample (WS25-29), the 3 ft excavation does not need to be expanded any further. Halo will now focus on hand digging the remaining excavation to 1' bgs.

Next Steps & Recommendations

Daily Site Visit Report

1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: East
	
Placard	Area where WS25-29'was collected
Viewing Direction: Northeast	**Viewing Direction**: Northwest
	
Area of excavation to be hand dug south, southeast of the heater treater	Area of excavation to be hand dug south, southeast of the heater treater

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: Southwest
	
Area of excavation to be hand dug south, southeast of the heater treater	Excavation northeast of heater treater
Viewing Direction: South	**Viewing Direction**: South
	
3 ft excavation progress	3 ft excavation progress

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
3 ft excavation progress	3 ft excavation progress

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	3/5/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	3/5/2025 11:55 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/5/2025 8:20 AM
Departed Site	3/5/2025 3:13 PM

Field Notes

9:09 On site at approximately 8:20 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

9:12 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. Focused on hand excavation near pad infrastructure and equipment and line strikes. Work to continue on hand digging the excavation south, southeast and east of the heater treater (south of pipe rack) and advancing areas southwest of heater treater using mini excavator

Halo sent out 3 employees for hand digging the excavation and a heavy equipment operator with a spotter today.

9:15 The hand crew was a different crew than I've been working with the prior weeks. I did a site walk through with them explaining what remains to be excavated. Upon arrival at ~8:20 am, Halo had not started digging yet, they were waiting for tools/equipment to be delivered.

Equipment was delivered at ~8:45 am and work on the excavation commenced.

16:52 Collected BS25-23 and field screened portion of the wall that was newly exposed (WS25-18) from today's excavation. All samples passed field screening criteria.

Daily Site Visit Report

14:41 Halo ceased excavation activities at 2:30 pm and left site at 2:40 pm.

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West

Placard

Viewing Direction: Northeast

Southwest corner of excavation facing northeast

Viewing Direction: North

South side of excavation facing north

Viewing Direction: East

East of south separator facing east

Daily Site Visit Report

Viewing Direction: East

Excavation progress

Viewing Direction: Northwest

Southeast corner of excavation facing northwest

Viewing Direction: Southwest

Excavation progress: east side of excavation facing southwest. Area BS25-24 and portion of WS25-18 were collected.

Viewing Direction: Southeast

North excavation (24E-04918, nAPP2431846528): backfilling (topsoil) being placed over the pipelines located at the 6ft excavation.

Daily Site Visit Report

Viewing Direction: East

North excavation (24E-04918, nAPP2431846528): backfilling (topsoil) being placed over the pipelines located at the 6ft excavation.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	3/6/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	3/7/2025 12:13 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/6/2025 8:14 AM
Departed Site	3/6/2025 3:43 PM

Field Notes

8:18 On site at approximately 8:15 am. I contacted Kent Retz informing him of my arrival and received authorization to proceed with excavation.

14:38 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. Focused on hand excavation near pad infrastructure and equipment and line strikes. Work to continue on hand digging the excavation south, southeast and east of the heater treater (south of pipe rack) and advancing areas southwest of heater treater using mini excavator

Halo sent out 3 employees for hand digging the excavation and a heavy equipment operator with a 2 spotters today.

14:42 Halo was able to finish up the hand excavation to the east, southeast, and south of the heater treater. I also directed them to step out WS25-21 an additional 6".

14:45 With the hand digging portion of the excavation complete, I had the excavator operator advance down/out the area where WS25-27 (was previously collected as WS25-28) and WS25-20 (combined previously collected WS25-27 and -28)

14:48 I collected BS25-24 at 1' bgs and -27 at 2' bgs; WS25-16 at 0-3' bgs, -17, -18, at 0-1' bgs, -19 at 0-2' bgs and -20 at 0-4' bgs.

14:49 All samples field screened for chlorides and hydrocarbons. All samples passed field screening criteria.

17:11 Halo has continued to work on backfilling the north excavation throughout the day

Daily Site Visit Report

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West

Placard

Viewing Direction: North

Area where WS25-17 was collected.

Viewing Direction: South

Area where WS25-17 was collected.

Viewing Direction: South

Area where WS25-17 was collected

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: Northwest
	
Area where BS25-24 was collected	Area where WS25-18 was collected
Viewing Direction: North	**Viewing Direction**: Southeast
	
Area where WS25-18 was collected	Area where WS25-19 was collected

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: West
	
Area where WS25-19 was collected	Area BS25-27 was collected
Viewing Direction: West	**Viewing Direction**: Northeast
	
Area where WS25-20 was collected	Southwest corner of excavation facing northeast

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: East
	
Area where WS25-20 was collected	WS25-21 advanced 0.5’
Viewing Direction: Southwest	**Viewing Direction**: North
	
Facing the southwest corner of the excavation	Area of the excavation between the south separator and heater treater

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: West
	
East of the south separator	Southeast corner of excavation facing west
Viewing Direction: Northwest	**Viewing Direction**: West
	
Southeast corner of excavation facing northwest	Area where WS25-16 was collected.

Daily Site Visit Report

Viewing Direction: East

Area where WS25-16 was collected.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	3/7/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	3/7/2025 11:43 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/7/2025 8:04 AM
Departed Site	3/7/2025 2:15 PM

Field Notes

8:10 On site at approximately 8:05 am. I contacted Kent Retz informing him of my arrival.

16:13 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. On site to collect confirmation samples.

Halo has a heavy equipment working on backfilling the north release. I informed Halo they could backfill all excavations north of the pipe rack but to hold off on the excavations to the south of the pipe rack until we get lab results for samples collected there.

15:51 I collected BS25-21 through -39 and WS25-16 through -23.

16:13 Using gps, I mapped the perimeter of the final excavation depths/footprint.

15:54 Due to high winds, field screening will be completed at office laboratory.

15:55 All samples field screened for chlorides using silver nitrate titration and TPH using petroflag.

All samples passed field screening criteria.

15:55 All samples jarred, COCs filled out and will be sent to lab for analysis.

Daily Site Visit Report

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West

Placard

Viewing Direction: East

Area where WS25-19, BS25-25 and BS25-27 were collected

Viewing Direction: West

Area where WS25-20, BS25-28 and BS25-29 were collected

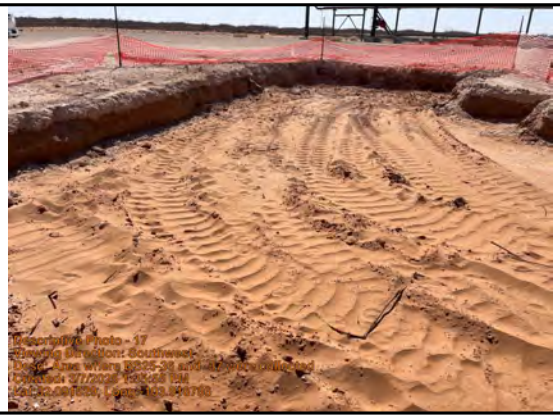
Viewing Direction: East

Area where WS25-20, BS25-29 and BS25-28 were collected

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
Area where WS25-21, BS25-30 and BS25-31 were collected	Area where WS25-21, BS25-31 and BS25-30 were collected
Viewing Direction: South	**Viewing Direction**: Southwest
	
Area where BS25-32 and -33 were collected	Area where BS25-34 and -35 were collected

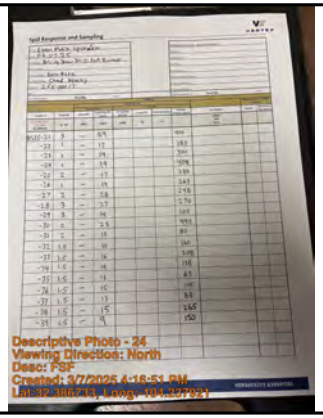
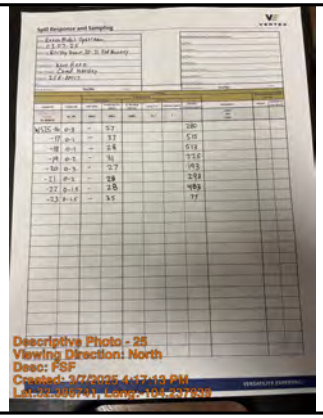
Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: West
	
Area where BS25-36 and -37 were collected	Area where BS25-38 and -39 were collected
Viewing Direction: West	**Viewing Direction**: West
	
Area where WS25-22 was collected	Area where WS25-16 and BS25-21 were collected

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Area where WS25-22 was collected	Area where WS25-23 was collected
Viewing Direction: Southeast	**Viewing Direction**: East
	
Area where WS25-23 was collected	Area where WS25-23 was collected

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
FSF	FSF
Viewing Direction: East	**Viewing Direction**: North
	
Area where WS25-16 and BS25-21 were collected	Area where WS25-17 and BS25-22 were collected

Daily Site Visit Report

Viewing Direction: South

Area where WS25-17 and BS25-23 were collected

Viewing Direction: Southwest

Area where WS25-17 and BS25-24 were collected

Viewing Direction: West

Are WS25-18 was collected

Viewing Direction: North

Area where WS25-18 and BS25-26 were collected

Daily Site Visit Report

Viewing Direction: West

Area where WS25-19 and BS25-25 were collected

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Soil Sampling

Client: Client: XTO Energy Inc. (US)

Location: Site: Brushy Draw 30-31 Fed Battery

Date: (SD: 3/7/25)

Sampling											
		Field Screening							Data Collection		
		Hydrocarbon		Chloride							
Sample ID	Depth (ft)	VOC ()	TPH (ppm)	EC Reading (mS/cm)	Temp (°C)	EC Chloride (ppm)	Chloride Titration (ppm)	Lab Analysis	Photo Taken	Marked on Sketch	Refusal Depth (ft)
BS25-21	3		29				400			✓	
BS25-22	1		12				185			✓	
BS25-23	1		14				300			✓	
BS25-24	1		19				408			✓	
BS25-25	2		17				230			✓	
BS25-26	1		19				263			✓	
BS25-27	2		28				298			✓	
BS25-28	3		22				270			✓	
BS25-29	3		14				105			✓	
BS25-30	2		23				495			✓	
BS25-31	2		13				80			✓	
BS25-32	1.5		10				160			✓	
BS25-33	1.5		16				208			✓	
BS25-34	1.5		14				138			✓	
BS25-35	1.5		13				63			✓	
BS25-36	1.5		15				115			✓	
BS25-37	1.5		13				88			✓	
BS25-38	1.5		15				265			✓	
BS25-39	1.5		9				150			✓	
WS25-16	0-3		27				280			✓	
WS25-17	0-1		37				515			✓	
WS25-18	0-1		28				513			✓	
WS25-19	0-2		31				225			✓	
WS25-20	0-3		27				193			✓	
WS25-21	0-2		28				293			✓	
WS25-22	0-1.5		28				438			✓	
WS25-23	0-1.5		25				77			✓	

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	3/7/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	3/7/2025 11:43 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/7/2025 8:04 AM
Departed Site	3/7/2025 2:15 PM

Field Notes

8:10 On site at approximately 8:05 am. I contacted Kent Retz informing him of my arrival.

16:13 25E-00017, nAPP2500254282:
I assessed site, completed JSA and reviewed safety for today's activities. On site to collect confirmation samples.

Halo has a heavy equipment working on backfilling the north release. I informed Halo they could backfill all excavations north of the pipe rack but to hold off on the excavations to the south of the pipe rack until we get lab results for samples collected there.

15:51 I collected BS25-21 through -39 and WS25-16 through -23.

16:13 Using gps, I mapped the perimeter of the final excavation depths/footprint.

15:54 Due to high winds, field screening will be completed at office laboratory.

15:55 All samples field screened for chlorides using silver nitrate titration and TPH using petroflag.

All samples passed field screening criteria.

15:55 All samples jarred, COCs filled out and will be sent to lab for analysis.

Daily Site Visit Report

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: West

Placard

Viewing Direction: East

Area where WS25-19, BS25-25 and BS25-27 were collected

Viewing Direction: West

Area where WS25-20, BS25-28 and BS25-29 were collected

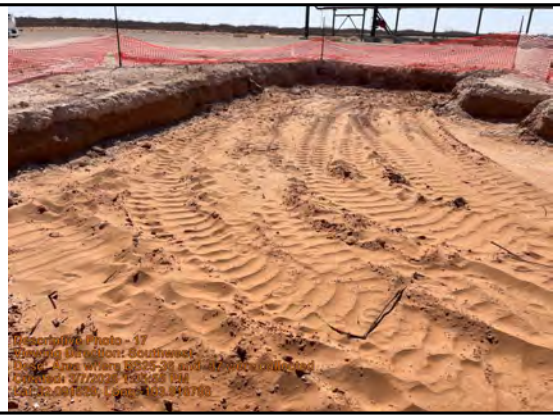
Viewing Direction: East

Area where WS25-20, BS25-29 and BS25-28 were collected

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
Area where WS25-21, BS25-30 and BS25-31 were collected	Area where WS25-21, BS25-31 and BS25-30 were collected
Viewing Direction: South	**Viewing Direction**: Southwest
	
Area where BS25-32 and -33 were collected	Area where BS25-34 and -35 were collected

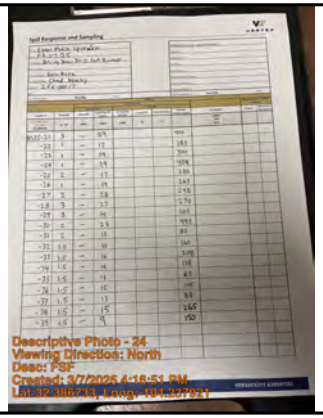
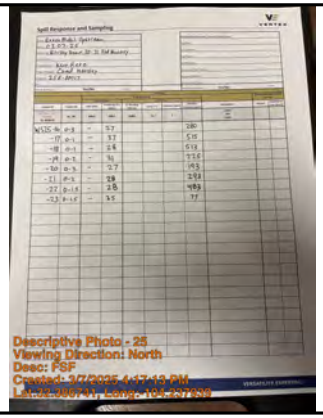
Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: West
	
Area where BS25-36 and -37 were collected	Area where BS25-38 and -39 were collected
Viewing Direction: West	**Viewing Direction**: West
	
Area where WS25-22 was collected	Area where WS25-16 and BS25-21 were collected

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Area where WS25-22 was collected	Area where WS25-23 was collected
Viewing Direction: Southeast	**Viewing Direction**: East
	
Area where WS25-23 was collected	Area where WS25-23 was collected

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
FSF	FSF
Viewing Direction: East	**Viewing Direction**: North
	
Area where WS25-16 and BS25-21 were collected	Area where WS25-17 and BS25-22 were collected

Daily Site Visit Report

Viewing Direction: South

Area where WS25-17 and BS25-23 were collected

Viewing Direction: Southwest

Area where WS25-17 and BS25-24 were collected

Viewing Direction: West

Are WS25-18 was collected

Viewing Direction: North

Area where WS25-18 and BS25-26 were collected

Daily Site Visit Report

Viewing Direction: West

Area where WS25-19 and BS25-25 were collected

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	3/8/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	3/8/2025 9:11 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/8/2025 8:45 AM
Departed Site	3/8/2025 10:05 AM

Field Notes

9:53 On site to document the final, completed excavation for release nAPP2500254282.

I assessed site, completed JSA and reviewed safety for today's activities.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: West
	
The north 1 foot excavation (north of the two large separators) facing south.	The 1.5 foot excavation south of the west large separator, north of the pipe rack)
Viewing Direction: Northwest	**Viewing Direction**: North
	
The 1.5 foot excavation southwest of the west large separator, north of the pipe rack)	The 1.5 foot excavation southwest of the west large separator, north of the pipe rack)

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: South
	
The 1.5 foot excavation southwest of the west large separator, north of the pipe rack)	The 1.5 foot excavation southwest of the west large separator, north of the pipe rack)

Viewing Direction: Northwest	**Viewing Direction**: East
	
The 1.5 and 3 foot excavations south of the pipe rack, northwest of the south separator.	The 1.5 and 3 foot excavations south of the pipe rack, northwest of the south separator.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: Northeast
	
The 1.5 and 3 foot excavations south of the pipe rack, northwest of the south separator.	The 1.5 foot excavation south of the pipe rack, south of the south separator.
Viewing Direction: West	**Viewing Direction**: Southeast
	
The 1.5 foot excavation south of the pipe rack, south of the south separator.	The north 1 foot excavation (north of the two large separators) facing southeast.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: East
	
The 1.5 foot excavation south of the pipe rack, southeast of the south separator.	The 1.5 and 2 foot excavations south of the pipe rack, east of the south separator.
Viewing Direction: East	**Viewing Direction**: East
	
The 3 and 2 foot excavations south of the pipe rack, east of the south separator.	The 3 and 2 foot excavations south of the pipe rack, east of the south separator.

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: East
	
The 3 and 2 foot excavations south of the pipe rack, east of the south separator.	The 2 and 1 foot excavations south of the pipe rack, southwest of the heater treater.
Viewing Direction: East	**Viewing Direction**: North
	
The 1 foot excavation south of the pipe rack, south of the heater treater.	The 1 and 3 foot excavations south of the pipe rack, south, southeast, and east of the heater treater.

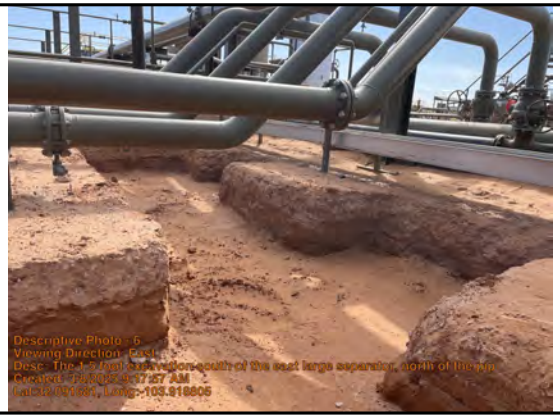
Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: West
	
The 1 foot excavation south of the pipe rack, south, southeast of the heater treater.	The 3 foot excavation south of the pipe rack, northeast of the heater treater.
Viewing Direction: South	**Viewing Direction**: East
	
The 1.5 foot excavation between the two large separators, north of the pipe rack)	The 3 foot excavation south of the pipe rack, northeast of the heater treater.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Northwest
	
The 1 and 3 foot excavation south of the pipe rack, northeast of the heater treater.	The 1 and 3 foot excavation south of the pipe rack, northeast of the heater treater.
Viewing Direction: South	**Viewing Direction**: South
	
The 1.5 foot excavation between the two large separators, north of the pipe rack)	The 1.5 foot excavation between the two large separators, north of the pipe rack)

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Northwest
	
The 1.5 foot excavation south of the east large separator, north of the pipe rack)	The 1.5 foot excavation southeast of the east large separator, north of the pipe rack)
Viewing Direction: South	**Viewing Direction**: North
	
The 1.5 foot excavation south of the east large separator, north of the pipe rack)	The 1.5 foot excavation south of the east large separator, north of the pipe rack)

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

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QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2500254282**
Incident Name	**NAPP2500254282 BRUSHY DRAW 30-31 FEDERAL BATTERY @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2207332396] BRUSHY DRAW 30-31 FED BATTERY**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BRUSHY DRAW 30-31 FEDERAL BATTERY
Date Release Discovered	01/01/2025
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Dump Line | Produced Water | Released: 47 BBL | Recovered: 10 BBL | Lost: 37 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 01/23/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Less than or equal 25 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 500 and 1000 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	6800
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	4598
GRO+DRO (EPA SW-846 Method 8015M)	4101
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	01/22/2025
On what date will (or did) the final sampling or liner inspection occur	03/20/2025
On what date will (or was) the remediation complete(d)	03/20/2025
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	6283
What is the estimated volume (in cubic yards) that will be remediated	408
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 04/07/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**442685**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**03/20/2025**
What was the (estimated) number of samples that were to be gathered	**6**
What was the sampling surface area in square feet	**50**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	6283
What was the total volume (cubic yards) remediated	408
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	6283
What was the total volume (in cubic yards) reclaimed	408
Summarize any additional remediation activities not included by answers (above)	see report

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 04/07/2025

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QUESTIONS (continued)

Operator:	OGRID:
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	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 449292
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation closure approved.	4/25/2025
bhall	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	4/25/2025
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	4/25/2025
bhall	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	4/25/2025
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	4/25/2025
bhall	The report states "ExxonMobil Upstream Company (Exxon) retained Vertex Resource Services Inc. (Vertex) to conduct a deferral request for a produced water release that occurred on January 1, 2025, at Brushy Draw 30 – 31 Federal Tank Battery facility ID fAPP2207332396 (hereafter referred to as the “site”). " Please be advised that a deferral is not necessary unless contamination above the closure standards is left in place. If a site is remediated to the closure standards and is waiting to be reclaimed when the site is no longer reasonably needed for production or subsequent drilling activities, a deferral is not needed.	4/25/2025